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ABSTRACT

This document reports the results of a conference attended by representatives of various educational research and development agencies. Conference goals were (1) to exchange information about common objectives and activities, and (2) to explore the possibility of forming a permanent group to review developments by the various agencies. Topics discussed in this report include (1) conference goals, (2) present agency efforts to improve educational planning and management, (3) an interest and activity survey of participating agencies, and (4) goals and plans for interagency cooperation. (Table I on pages 68A-68H may reproduce poorly.) (Author/LLR)

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COORDINATING CONFERENCE ON EDUCATIONAL PLANNING AND MANAGEMENT SYSTEMS: A REPORT OF OUTCOMES

November 24-25, 1969

Sponsored by the Communication Program of the Far West Laboratory for Educational Research and Development

Conference Chairman
Charles L. Jenks

Report compiled by
Linda J. York

Produced by
FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1 Garden Circle, Hotel Claremont
Berkeley, California 94705

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The Laboratory was established through a Joint Powers Agreement, in February 1966. Signatories as of June 1969, include:

The Regents of the University of California
The California State Board of Education
The Trustees of the California State Colleges
The County Superintendent of Schools of the County of Monterey
The Board of Education of the San Francisco Unified School District
The Regents of the University of Nevada
The Nevada State Board of Education
The Board of Regents of the University of Utah
The Utah State Board of Education

FOREWORD

The goal of the Communication Program of the Far West Laboratory is to improve the capacity for, and quality of, school decision-making regarding the use of products of educational research and development (R & D). At present, school planners and decision-makers do not have access to information about R & D products in forms that are useful to them. They also lack the capability to use the available information most effectively. The Communication Program seeks to improve these conditions in three ways: (a) by developing and maintaining mechanisms for the retrieval and storage of relevant R & D information, (b) by developing processed information packages for school use about promising educational developments, and (c) by developing an educational planning and management system to help schools make more rational decisions about effective use of R & D products.

As part of its conceptualization of the educational planning and management system, the Communication Program called the Coordinating Conference described in this report. Representatives of agencies from across the country that are pursuing similar development objectives were invited to attend. The two-day conference served as a means of determining what the Nation's schools need to improve their educational planning and management competencies, and what the agencies represented are doing to meet these needs. It also served as a forum for discussing how the agencies can work together to expedite the development of all the components needed to construct an educational planning and management system.

This report describes the purposes and proceedings of the conference, the programs of the development agencies represented at the conference, and the means of inter-agency cooperation discussed by the participants.

The Laboratory hopes that the report will prove useful as an indication of the status both of conceptualization of planning and management models for school personnel, and of developments in training and organizational patterns to support these models.

The Coordinating Conference was presided over by Mr. Charles L. Jenks of the Communication Program. Mrs. Linda York served as the recording secretary for the conference and subsequently supervised the compilation and publication of this report. All of the Communication Program personnel who participated in the conference (Mr. Charles L. Jenks, Dr. Paul D. Hood, Dr. Bela H. Banathy, Dr. Joyce P. Gall, Mr. Casey Roberts, and Mrs. Linda York) assisted in conducting interviews with conference participants to gather information included in the program descriptions which make up Chapter II of this report. In addition, Mr. Jenks, Dr. Hood, and Dr. Banathy are acknowledged for their contributions to Chapters I, III, and IV, respectively. Finally special thanks are given to Mrs. Jacquelyn Mitchell, Miss Cassandra Stovall, and Mrs. Ann Wallgren for their clerical assistance in the preparation of the report.

Paul D. Hood, Director

Communication Program

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CHAPTER I

GOALS FOR THE COORDINATING CONFERENCE ON EDUCATIONAL PLANNING AND MANAGEMENT SYSTEMS

One of the objectives of the Communication Program of the Far West Laboratory for Educational Research and Development is the design and testing of an Instructional Planning and Management System. The system will enable schools to assess their existing capabilities for instructional planning, to train their personnel, and to select an appropriate organizational arrangement by which to more effectively plan and improve instruction.

A first step in the design of this system is an extensive analysis and verificatjon of the competencies required for instructional planning and management. There are several major sources of information for this analysis: (a) a review of the literature concerned with instructional planning and management, (b) discussions with school people who are actively engaged in planning and management of instructional programs, and (c) contact with other educational agencies who are developing training materials to improve the planning and management capabilities of school people. This report describes one of the Communication Program's efforts of this third type.

Literature reviews indicated that there were increasing numbers of organizations and persons working to create adaptable systems and mechanisms by which schools can more effectively plan and manage their instructional program. Although there appeared to be many differences in the specific training areas under development and approaches being used, considerable similarity existed among a few agencies in terms of their long-range objectives.

Goals for the Conference. Therefore, the Communication Program of the Far West Laboratory called a conference of representatives of these educational agencies to create an exchange of information about common goals and activities. It was hoped that this exchange would facilitate further

coordination among the agencies involved and, by doing so, would prevent premature closure during conceptualization. The conference was also called to enlist the cooperation of the participants in the identification of additional developments that might be needed in a fully functioning instructional planning and management system, but that are not yet under development.

Another purpose of the conference was to explore the possibility of forming a more or less permanent group for the reviewing and critiquing of developments produced by the various agencies. It was hoped that the conference participants might discuss the implications of more extensive cooperative efforts in development, e.g. joint development, or mutual testing of products. Although inter-agency cooperation is difficult to coordinate, the long-range advantages of such cooperation could prove valuable to all developmental agencies in terms of (a) reducing the time lag between conceptualization and dissemination of products, and (b) making best use of the available staff competencies of the various agencies by learning from one another about the development of training for various skill areas.

Agenda for the Conference. With these purposes in mind, the following agenda was prepared for the two-day conference:

Monday, November 24, 1969

Morning -- What is Being Done?

Discussion of the efforts being taken by each organization represented to increase research utilization skills among school personnel in order to facilitate planning, implementation, and evaluation of educational programs. Approximately 15

minutes was available for each participant to describe his developmental activities and to respond to questions.

Afternoon -- What Might Be Done?

Discussion of what is needed by schools and of possible means by which to develop and implement an Educational Planning and Management System for the Nation's schools. Participants would consider priorities of developmental activities, e.g. training topics, and attempt to pinpoint necessary developments which agencies have apparently neglected to date.

Tuesday, November 25, 1969

Morning -- A Plan for Inter-Agency Cooperation.

Consideration of the alternatives discussed on Monday afternoon, in view of the available resources and the constraints acting upon the participating organizations, as well as the most pressing requirements of the national educational community.

Afternoon -- Decision making concerning interorganization cooperation in the future.

Participants would attempt to reach consensus as to the means of cooperation (e.g. information exchange, seminars and conferences, joint development, sharing of staff and technology) which they would seek in the future.

Conference Participants. The Communication Program identified twelve organizations that were developing means by which to improve the capabilities of school people to plan and manage their instructional program (i.e. training programs, systems models, management tools, or organizational arrangements within which school personnel can jointly perform planning and management

functions). The representatives from these agencies, and from the Far West Laboratory, who attended the conference on November 24-25, 1969, are listed below:

Communication Program, Far West Laboratory for Educational Research and Development

Dr. Paul Hood

Dr. Bela Banathy

Mr. Charles L. Jenks (Conference Chairman)

Dr. Joyce Gall

Mr. Casey Roberts

Mrs. Linda York

Administering for Change Program, Research for Better Schools, Inc.

Dr. Fred Tanger

Dr. Stan Temkin

Dr. Louis Maguire

Administrative and Organizational Systems (AOS) Program, Regional Education Laboratory for the Carolinas and Virginia

Dr. Robert Glover

Southwest Regional Laboratory for Educational Research and Development

Dr. Ben Munger*

*A representative from the Southwest Regional Laboratory for Educational Research and Development attended the conference, but insufficient information about the training materials developed by SWRL was obtained by the writing of this report to be reported in Chapter II.

Program 100: Developing Instructional Systems to Improve Teacher Competencies, Northwest Regional Educational Laboratory

Dr. Charles Jung*

Program 50: Instructional Materials Development Program, Center for the Advanced Study of Educational Administration

Dr. Terry Eidell

Dr. John Nagle

Wisconsin Research and Development Center for Cognitive Learning

Dr. Mary Quilling

Knowledge Utilization: Conception and Measurement Program, Center for Research on Utilization of Scientific Knowledge, Institute for Social Research

Dr. Ronald Havelock

The Research Corporation of the Association of School Business Officials

Dr. William Curtis

National Academy for School Executives, American Association of School Administrators

Dr. Richard Morrow

Operation PEP: A State-wide Project to Prepare Educational Planners for California

Dr. Russell Kent

Project on Evaluation of the Elementary School Program, California Elementary School Administrators Association

Dr. Edward Beaubier*

Dr. Francis Watson

*These participants visited with the Communication Program subsequent to the November conference.

School of Education and Graduate School of Business, Stanford University

Dr. Michael Kirst

Organization of the Conference Report. The information presented during the Monday morning discussion of existing agency programs, as well as additional information obtained by the Communication Program staff through correspondence and interviewing, has been compiled into program descriptions which compose Chapter II. Chapter II also includes a matrix devised by the Communication Program to display the educational planning and management system as it is being developed through the efforts of the various agencies represented at the conference. The matrix represents an attempt to address the subject which had been proposed for the Monday afternoon discussion, that is, what developments are needed to make a fully functional Educational Planning and Management System. This subject was never closely examined by the conference group because of the need to extend the morning discussion of existing programs into the afternoon session. The matrix indicates which aspects of educational planning and management are being dealt with by several agencies and which aspects are receiving very little attention. It also indicates the different approaches being taken by various agencies to develop the same aspect of educational planning and management (e.g. different target groups, differing comprehensiveness of training). And finally, the discussion of cooperative arrangements which took place during the Tuesday sessions is related in Chapter IV of the report.

CHAPTER II

PRESENT AGENCY EFFORTS TO IMPROVE EDUCATIONAL PLANNING AND MANAGEMENT

Representatives from the twelve agencies who gathered for the conference on educational planning and management provided information concerning their current projects and plans for future developments to the conference assemblage and to the staff of the Communication Program. These agencies included regional educational laboratories, R & D centers, professional education associations, a Title III project, and a university graduate program. Although the projects of these agencies are all basically related, that is, they all represent attempts to improve the educational planning and management capabilities of the Nation's schools, there are many dissimilarities among them as to target group for training efforts, nature of the training experience, developmental process being followed, and present stage of development. Descriptions of the developmental efforts of each of the twelve agencies follow. Table I at the end of this chapter summarizes these efforts in the form of a matrix depicting the existing state of development of educational planning and management systems.

Far West Laboratory — Communication Program for Educational Research and Development, Berkeley, California

Objectives. The Communication Program of the Far West Laboratory for Educational Research and Development addresses itself to bridging the gap between educational R & D and its potential users in the school. The Program is committed to a product development approach, which seeks to provide school personnel with better organized and more useful R & D information and with necessary organizational structure and training to make effective use of that information in terms of instructional planning and change.

To accomplish these objectives, the Communication Program staff is working simultaneously in three areas:

1. Component 1 is collecting, organizing, and storing R & D information relevant to educational developments and instructional planning;
2. Component 2 is developing information systems by which to provide school personnel with information on curriculum alternatives; and
3. Component 3 (the host of the conference) is developing an Instructional Planning System which will enable schools, regardless of size or resources, to assess their existing staff capabilities for instructional planning, to select an appropriate organizational arrangement within which planning and management functions can be conducted by their staff, and to train their personnel to more effectively plan and improve their instruction.

Program History. Component 3's early efforts consisted of investigating present conditions in the public schools. Input information about the needs of the schools for instructional planning capabilities was derived from these investigations, such as the following: Educational R & D

Information System Requirements (A Task Force Report); Arrangements and Training for Effective Use of Educational R & D Information (A Literature Survey); Decision Processes and Information Needs in Education (A field survey), and in-depth studies of two organizational arrangements, the School Research Office and the Research and Instructional Unit (R & I Unit), an invention of the Wisconsin Research and Development Center for Cognitive Learning.

In undertaking these investigations, the Communication Program had assumed that there existed organizational arrangements that were ready for adoption and that schools did possess the competencies required to perform the various tasks in such arrangements. However, these early investigations of conditions and needs in schools resulted in the following conclusions: schools have a genuine desire to improve on their present ways of planning the instructional program, but they lack adequate organizational arrangements and training for doing so. Also, existing training efforts appear to ignore some of the most important aspects of systematic planning such as analysis of existing conditions, needs assessment, problem formulation, and decision making.

Instructional Planning and Management System. In view of these conclusions, the Communication Program is committing itself for the next several years to the design and development of an Instructional Planning and Management System. The primary target group for whom the system will be designed is school people who fall into the category of "curriculum decision makers," i.e. superintendents and assistant superintendents, directors of instruction, curriculum supervisors, or other persons who may be involved in planning. The key instructional components of this system will be a series of self-contained training packages designed on the basis

of systems, job and task analysis. The content of each package will focus on knowledge and skills that are directly relevant to the instructional planning and decision making tasks necessary to effect instructional improvement in elementary and secondary schools. The developers hope to design the training packages as combinations of smaller units which can be fit together in various sequences in order to accommodate the needs of individual school staffs. The packages will be organized with emphasis on active training by means of programmed instruction, simulations, individual and group problem-solving, and field experience assignments. They will be designed to allow for eventual use in a variety of educational settings, including schools of education, university extensions, summer institutes, and school district inservice training.

Initial Training Package. The first training package to be developed by the Communication Program, Instructional Planning, will focus on four related processes which will enable schools to consider their instructional program in relation to their problems and goals, and will prepare them to make wiser choices among the many available materials and techniques of instruction. These four processes, each of which will be the topic of a component unit of the first training package, are:

1. Problem Analysis. The primary purpose of training in problem analysis is to enable school people to obtain and assess information in order to make program decisions. Problem Analysis involves a process of identifying, defining, and screening perceived problems for validity and seriousness. The output of problem analysis is information concerning the areas of school functioning that are most in need of improvement.

2. Goal Setting. The goal setting training unit will develop skills in examining, revising, and setting educational goals appropriate to the problems validated by the Problem Analysis process, or appropriate to continuing areas of concern to the school in which no "problems" presently exist.
3. Objectives. A training unit on objectives will enable schools to derive measurable objectives from their educational goals, to judge the worth and importance of objectives, and to consider various sources of objectives from which they can select rather than depending on their own abilities and limited time to derive objectives "from scratch."
4. Evaluation. A training unit on evaluation will convey certain fundamental knowledge about educational evaluation and appropriate use when working with objectives. The unit will present a planning process for objective-based evaluation emphasizing the selection and development of performance indicators by which to assess the attainment of educational outcomes.

Problem Analysis. The initial developmental effort will be devoted to the training unit on Problem Analysis. Before schools begin to look for solutions to problems which have been identified within the school system, the problems must be screened for (a) their validity (i.e., do actual discrepancies between present and desired conditions exist), and (b) their seriousness (i.e., how severe are the problems). When these analyses have been performed, schools can establish a priority for problems upon which they should act. This aspect of Problem Analysis can probably be operationally defined with less difficulty than other aspects and, therefore, it appears to be a logical point of entry for the developmental team. A prototype

version of the training materials on Problem Analysis will undergo prototype testing with a sample of potential users during the summer of 1970 in a university-based workshop.

Planned Developments. The second training package being planned, Instructional Programming, will cover specific training techniques to facilitate decision-making, as well as the broader area of selecting among instructional alternatives. The third package, Instructional Management, will emphasize budgeting, monitoring, evaluation, and adjustment strategies for managing the instructional program. Eventually, the Instructional Planning System will incorporate two additional strategies which will complement the training packages. First, techniques and information which will help schools to consider, select and implement organizational arrangements appropriate to their needs will be provided. Second, the system will contain a variety of support materials such as guidelines, suggested resources, and diagnostic techniques by which schools can assess their existing personnel capabilities in order to select training units based on need.

Administering for Change Program
Research for Better Schools, Inc.
Philadelphia, Pennsylvania

Objectives. The Administering for Change Program has committed itself to improving the extent to which administrators of local school districts are capable of effecting changes. The rationale behind the program is not that school administrators are resistant to change, but that appropriate mechanisms for effectively administering change within the school district are not available to them. The program has been in operation since September 1968, and consists of three components: Knowledge Base, Comprehensive Planning, and Administrative Management. The predecessor of the Administering for Change Program was the RITE (Research Implementation Team in Education) project. RITE attempted to create and train teams of information processing specialists who could retrieve and evaluate information necessary to facilitate the operation of the planning and decision-making structures of school systems. The project failed to reach its objectives and was discontinued by RBS.

The program staff now addresses itself to two basic functions: (a) the conceptualization of the change process as it currently exists in the real world, and (b) the development of organizational structures, tools and training methods to improve the change capability of school districts. The first function is served by the staff of the Knowledge Base Component, which maintains a continually updated file of information to support the activities of the other two components. Work on the second function is performed by the staffs of the Comprehensive Planning and the Administrative Management Components.

Comprehensive Planning. The Comprehensive Planning Component is developing mechanisms which will assist school districts in systematically planning for the long-range improvement of the district. The model for comprehensive planning which is under development will facilitate planning and decision-making by relating inputs (costs) to outputs. It will include a manual written on several levels so as to provide information useful for key district administrators through classroom teachers, a computer program to process planning information, and training in making decisions about resource allocation.

This model will enable administrators to look beyond the immediate problems for which funds must be allocated and plan for the future of their district. Comprehensive planning begins with an examination of the entire school district as it is currently operating. Data files will be established as a product of this evaluation, which will provide the information base for making any future decisions about changes in the district's allocation of resources. The Comprehensive Planning mechanism takes a school district through the following processes, each of which results in the creation of a data file:

1. examination of the district's overall goals
2. examination of the district's objectives
3. examination of the district's ongoing operations
4. examination of the district's value set (so that preferences or priorities can be established among objectives)
5. specification of performance criteria for the district's objectives
6. measurement of the performance outcomes in terms of the district's objectives

7. measurement of the costs to the district, in order that
   (a) respective operations can be evaluated in terms of effectiveness
   (b) respective operations can be evaluated in terms of efficiency
   (c) the current allocation of resources can be evaluated
   (d) alternative decisions about change from the district's current operations can be generated

This model entails consideration of the effects of a proposed change on the entire school district. Initial input into the model is an assessment of pupil needs. RBS has developed a model for assessing student needs based upon Pupil-Event Analysis (derived from the Critical Incident Technique), which involves the gathering of complaints, praise, and suggestions concerning school activities in which students participate. Currently, one school system is serving as the development site for the Comprehensive Planning Model. A flow chart has been developed indicating the flow of information necessary for comprehensive planning. The development of the Comprehensive Planning manual and computer program should be completed in 1971, so that they can be field tested in 1972.

Administrative Management. Specific tools and techniques are being developed by the Administrative Management Component that will provide immediate, direct assistance to district administrators in planning and implementing changes within their district. One such management tool being developed is the Problem-Solving Guide, which presents school administrators with a systematic method for locating problem situations in their district's operations and planning for solutions to them. The guide consists of a series of steps to follow in solving a problem, from identification of a need or deficiency in the district to installation of a solution. Also provided are criteria which help users of the guide in determining when

they have satisfactorily completed one step and are ready to proceed to the next. The steps of the guide are as follows:

Phase I. Study ("to find out")

1. Obtain a valid statement of educational need.
2. Limit the problem.
3. Provide alternative solutions to the problem.
4. Select a feasible (practical) alternative.

Phase II. Planning ("to prepare to do")

5. Develop project objectives which are observable.
6. Develop project specifications.
7. Detail project control requirements.
8. Consider staffing requirements.
9. Secure approval for next phase (experiment or field text).

Phase IIIa Experiment ("to vary project parameters and study effects")

10. Implement the experiments.
11. Monitor and evaluate performance.
12. Generate preliminary recommendations.

Phase IIIb Field Test ("to study in different settings")

13. Repeat steps 5-8 if there was an experiment phase.
14. Implement the field test.
15. Repeat steps 11-12.

Phase IV. Adoption ("to install")

Project Management. Another Administering for Change Program effort is the development of organizational structures and training materials to guide school administrators in the implementation of project management techniques in local school districts. A school administrator trained in the techniques of project management should view school organization not in terms of functions (e.g. teaching, personnel services) or roles (e.g. principal, curriculum coordinator), but in terms of projects which have been selected as means for achieving certain objectives. Project management picks up where the Problem-Solving Guide left off, by helping local school districts to plan and implement a new product, method, or activity without disrupting the ongoing programs of the district. Ideally, initiation of a project would be preceded by performance of all the steps in the Problem-Solving Guide. Currently, RBS is engaged in the evaluation of nine 3-day project management training seminars which the Laboratory is sponsoring for ten urban school districts in New Jersey. The actual instruction and the training materials employed are being provided by a management consultant firm. Based upon the findings of the RBS evaluation, the Administering for Change staff will develop their own project management training materials and seminars by adapting the industrial management techniques specifically for use by school administrators. This training will probably include a manual on planning techniques, a seminar that will incorporate audiovisual as well as printed materials, and take-home materials for seminar participants. RBS plans to field test their training both in a local school district and in an intermediate administrative unit, probably beginning in 1971.

Support Projects. A few additional projects will lend support to these major products of the Administering for Change Program. One of these is a Change Continuum Theory which will permit measurement or diagnosis of the extent to which school districts are capable of bringing about changes. Points along the continuum may represent activities which are indicative of changeability or stability. Based upon this theory, "change profiles" will be constructed for school districts and alternative change strategies can be prescribed for school districts with various change profiles. Current development of the Change Continuum has not gone beyond conceptualization, based on a literature search of existing theory and research and measurement techniques. Change strategies for various profile groups will be developed during 1971, and field testing is scheduled for 1972.

Another support project is the development of a Socio-Political Theory from which instruments for measuring attitudes and opinions of community groups will be derived. This assessment tool should provide information about the community's perceptions of school goals and activities to assist school administrators in making educational decisions. Development of the instrument should be completed sometime during 1970.

Administrative and Organizational Systems (AOS) Program
Regional Education Laboratory for the Carolinas and Virginia
Durham, North Carolina

Objectives. The goal of the Senior College and University Level component of RELCV's Administrative and Organizational Systems program is to improve the management of institutions of higher education by assisting administrators in applying the systems approach to planning and decision making. Within five years, RELCV hopes to establish a system by which college administrators can collect information for planning and decision making as a by-product of their regular computer-based administrative operations. The system approach to planning and decision making which RELCV advocates implies the following steps:

1. clarification of institutional goals;
2. derivation from goals of measurable objectives to be used as performance criteria;
3. assessment of progress toward goal attainment by comparing measures of output with objectives;
4. determination of need to change current practice;
5. comparisons of current practices with alternatives in terms of expected outputs and requisite resource inputs;
6. formulation of a plan consisting of expected outcomes, resource requirements, implementation strategy, time frames, and criteria for evaluation;
7. and evaluation of decision in terms of cost-benefit comparisons between current practice and feasible alternatives.

Management Information System. Implementation of the systems approach in such complex organizations as higher educational institutions is heavily dependent upon computer-based information systems. A systematic

decision making operation requires current, accurate, and comprehensive statistical information concerning the resources, learning environments, and products of colleges and universities. Consequently, RELCV has delegated management information systems to an important role in the Administrative and Organizational Systems program. RELCV has developed the College and University Management Information System, a conceptual framework for a total information system at the institutional level. It describes the systems flow, the interrelationships among data files, and the characteristics of data elements. Operational computer-based administrative applications have been identified and acquired in such areas as admissions, financial aid, registration, general ledger accounting, and personnel records. RELCV is participating, with the boards of higher education in its three-stage region, in attempts to coordinate the planning of management information systems. Statewide planning is underway to institute coordinated systems of reporting higher education data in Virginia, North Carolina, and South Carolina.

Data Collection. RELCV has designed a Data Collection Model that will supply the information necessary for effective planning and decision making. The model proceeds from consideration of goals to objectives, educational programs, organizing structures, administrative processes, students, staffing, facilities, finances, decisions, and evaluation. At each phase major categories of decisions which it is possible for an institution to make in order to effect change have been identified. The program specifies the particular research needs and data requirements of each decision category. Research studies, data-collection instruments, management reports, and selected data elements in the computerized files of the management information system are described for each decision category in the model. An initial version of a manual for administrators explaining

the rationale and implementation strategy for the Model Data Collection Program was scheduled for completion at the end of 1969.

In order to bring about effective application of this data collection model the RELCV staff will, during the 1970 contract year, acquire or develop three new data collection instruments and methods for clarifying goals, deriving measurable objectives, and evaluating the effects of past decisions. RELCV is negotiating with the Educational Testing Service for the development of an Institutional Goals Inventory that will enable administrators to assess the goal perceptions of members of their campus community. This instrument will be designed to permit its administration to various groups, including administrators, faculty members, trustees, students, parents, alumni, legislators, employers, members of local communities, administrators of funding agencies, and government staff. RELCV will also develop guidelines, supported by numerous examples, for constructing measurable institutional objectives from statements of institutional goals. Thirdly, to aid in the evaluation of past decisions, standardized decision documentation procedures will be developed by RELCV and incorporated into a self-instructional manual.

If funding permits, three additional data collection instruments can be developed during the current contract year: a faculty morale questionnaire to assess factors of faculty satisfaction and dissatisfaction; an inventory of roles and values designed to collect data concerning the perceived roles of administrators, faculty, and students in academic governance; and a survey instrument to assess progress among colleges and universities in the adoption of innovative developments in administrative practices, curricula, instruction, instructional research, data analysis, and computer-based applications in research and practice.

Training for College and University Administrators. The target population that will be most directly affected by the outputs of the AOS program is those administrators who have the major responsibility for providing information to the key decision makers in senior colleges and universities. A more specific target is the Educational Development Officer (EDO), a new role created by RELCV as a combination institutional researcher and change-catalyst. To increase the use of computer-based data analysis methods in the solution of institutional problems, RELCV is developing self-instructional training materials for the EDO and other members of the institutional decision making team on the collection of data, computer-based procedures for analyzing data, and developmental research designs. Self-contained training packages will be designed for specific data gathering and processing methods. They will incorporate procedures, forms, computer programs, and sample problems for the user to solve. Each package will proceed from fairly unsophisticated to more advanced instruction. Eventually, possibly within five years, the training will include over 100 packages. RELCV plans to produce the packages at a rate of approximately two per month. Eventually the content of the training will extend over the following areas:

1. conceptual frameworks for applying theory and research to institutional practice;
2. reviews of research and annotated bibliographies containing highly selected lists of prototype research studies, computer-based systems, and administrative practices;
3. user manuals for administrators describing the interaction of the users with specific computer-based administrative, data management, and data analysis systems;

4. technical manuals for systems analysts and programmers providing the formal documentation required to test, evaluate, modify, and install computer-based administrative, data management, and data analysis systems;
5. procedures manuals for administrators concerned with the collection, recording, and preparation of data required for planning, evaluation, and decision making;
6. model developmental research designs for administrators, containing the following information; objectives of the model, description of the problem, summary of research, procedures for collecting data, research design, data analysis methods, interpretation of results, and implications for practice;
7. descriptive materials on innovative administrative and organizational practices; and
8. documentation of installation strategies including planning, orientation, training, field testing, evaluation, modification, and operational implementation.

Evaluation. Evaluation of the AOS program will be based on pre- and post data collected by survey instruments, structured interviews conducted by field staff, data collected by task force study teams, and documentation of instructional decisions. Evaluators will be looking for evidence that the following objectives are being met:

1. an increasing tendency in colleges to incorporate the results of research findings in the planning and decision making process;
2. colleges will use new data-collection instruments and increasingly sophisticated data-analysis techniques to convert data to useful information;

3. an observable increase in the number and quality of research reports related to decision making produced by colleges;
4. an observable increase in the use of computers in administrative operations, and the collection of information for decision making as a routine by-product of these processes; and
5. colleges will be more inclined to adopt available innovations in administrative and educational practices.

A four-college consortium consisting of Furman University, Lynchburg College, North Carolina Central University, and Old Dominion University has been formed to participate in the initial installation, training, and evaluation activities for the full AOS program. A larger 19 college consortium is also available for development and testing of individual pieces of the program, such as research instruments, data-collection procedures, and training workshops for Educational Development Officers. Training of EDO's will take place two days per month during the academic year at four-college consortium institutions, and approximately two days per academic year in the larger consortium.

Program 100: Developing Instructional Systems to Improve Teacher Competencies
Northwest Regional Educational Laboratory
Portland, Oregon

Objectives. The ten-year objectives of NWREL's Program 100 are to develop five instructional systems available to all teachers in the Northwest by 1977, and to establish mechanisms that will involve educators throughout the Northwest in refinement of and addition to these instructional systems. The five instructional systems planned for development by Program 100 seek to improve the following teaching skills:

1. Promoting pupil initiated and self-directed learning;
2. Improving interaction between teachers and pupils;
3. Increasing competencies for objective analysis of instruction and planned change;
4. Maximizing the effectiveness of interpersonal relations; and
5. Providing support for continuous learning of school personnel.

The third and fifth instructional systems cited above are pertinent to the discussion of training requirements which took place at the Coordinating Conference. The third instructional system will include two relevant training packages (Research Utilizing Problem Solving Process, and Systems Technology), while the fifth instructional system will consist of one package (Preparing Educational Training Consultants).

Research Utilizing Problem Solving. The Research Utilizing Problem Solving Process package is designed to increase teachers' teamwork skills and to develop the following problem-identification and problem-solving skills:

1. Formulating improvement goals;
2. Using data-gathering instruments and techniques for diagnosing classroom conditions;

3. Deriving action implications from relevant data gathered from the local setting;
4. Designing action-research projects at the classroom and school building level;
5. Using instruments for evaluative assessment;
6. Analysis and interpretation of action-research data; and
7. Dissemination of results and innovations.

The RUPS training materials are based upon a theoretical model developed by Jung and Lippett for the Cooperative Project for Educational Development at the University of Michigan. The package, which is designed for classroom teachers of all subjects and of all grades, consists of 23 hours of instruction. The training materials include information sheets on basic concepts and techniques of problem-solving, exercises and an audiotape, as well as an instructor's guide. Although the materials may be used for self-instruction, they are designed to have the greatest effect upon trainees when employed in workshop settings under the administration of a trained instructor. The use of structured workshops conducted in accordance with the provided instructor's guide would insure that the training materials are presented in their entirety and in the sequence intended by the developers. Many of the RUPS exercises are designed to be conducted in small groups, in order to simultaneously develop the teamwork skills of the participants. The prototype Research Utilizing Problem Solving Process package has been used in numerous field trials. To date, the RUPS package has been used in 20 states by over 3,000 people. The prototype package is currently being revised and should be completed in the form of an interim product by February of 1970. NWREL designates an interim product as one which is workable and capable of achieving its major objectives. The interim RUPS package will be accompanied by a user's guide that will indicate the risks

involved in using the product at this stage. During 1970, the revised package will be subjected to a full-blown field test involving approximately 1,000 teachers. The results of this field test will enable the Program 100 staff to make determinations as to what results the RUPS package will achieve under given conditions. The development of a booklet of diagnostic tools for diagnosing school building environments that will support the RUPS package is also planned.

Program 100 plans to create various adaptations of the RUPS materials to assist individuals in applying the problem-solving process to particular substantive issues. The first such adaptation to be produced resulted from a contract between NWREL and Title III directors from fourteen western states. The resulting training package, called A Problem-Solving Approach to Title III Dissemination, was field tested at a Title III Dissemination Conference in Portland during August of 1969. Discussions have been held with the Washington State Department of Public Instruction about a second adaptation for training Title I advisory committees, and with a midwestern industrial research firm about a third adaptation for assisting local school districts in the implementation of modular scheduling.

Systems Technology. The objective of the second major training package to be developed by Program 100, Systems Technology, is to help teachers utilize systems analysis and systems synthesis skills to formulate classroom objectives and manage instruction. The training materials to be used are a synthesis of those developed by Corrigan at Chapman College in Orange, California and those of Geis and his colleagues at the University of Michigan. Program 100 staffers describe the content of this package as "planning on getting from here to there with some predictable measure of success." These materials will also be designed to improve the skills of classroom teachers and will constitute approximately 60 hours of instruction.

The training will incorporate such instructional techniques as programmed exercises, simulations, practicum experiences, classroom data gathering with recorders, and observation feedback experiences. A prototype of the Systems Technology package should be ready for an initial field trial by late spring of 1970.

Preparing Education Training Consultants. The third instructional package, Preparing Education Training Consultants, will be more comprehensive than the preceding two. The objective of this package is to prepare school personnel to conduct leadership training programs. Unlike the other two packages, it will be designed primarily for such people as team leaders, curriculum supervisors, or principals, that is, people who work directly with and/or supervise teachers. This training may also prove useful to state departments of education and teacher education institutions. The training materials, which will be adapted from a training design created by the National Training Laboratories, will deal with the following topics: (a) interpersonal skills; (b) consulting skills; (c) diagnosing training needs and strategies in a system; (d) readiness for involvement in training; (e) designing skill training exercises; (f) conducting skill training exercises; (g) use of training resources; (h) conceptualizing programmatic training sequences; and (i) commitments to training. The training for Education Training Consultants has conceptually been divided into three separate sections, which will be developed and field tested independently of one another. Section I, which deals with designing and conducting skill training exercises, will involve approximately 100 hours, while Section II on consultation skills and Section III on organizational development will each require approximately 80 hours. Section I of the training in now in prototype form, having completed two rounds of field trial and revision. The small group of people who were trained to conduct

skills training during the first field trial themselves taught the larger group of trainees who participated in the second field trial. Section I should undergo one year of field test beginning sometime during the 1970 contract year. The training materials for the Section II package on consultation skills are under development and their first field trial is scheduled for the summer of 1970. Program 100's work on the Section III package on organizational development is presently limited to information retrieval and review.

Evaluation. Various evaluative data is collected by Program 100 during the field trials. Program 100 is attempting to develop standardized procedures and instruments for collecting process data and information about utilization of training that can be applied to all instructional packages in the program. In addition, specific kinds of data pertinent to the three aforementioned training packages are collected. For example, pre- and post-audio tapes of group sessions are obtained and the developers screen them for examples of improved interpersonal behavior; cognitive paper and pencil tests are administered; and specimens of the trainees' products are collected.

Program 100 envisions a diffusion process that will involve personnel of related educational institutions such as State Departments of Education, teacher education institutions, teachers associations, and local school systems. It is hoped that such agencies will themselves fund and conduct workshops based upon the NWREL training materials. Eventually, the National Training Laboratories may publish the Research Utilizing Problem Solving and Preparing Education Training Consultants packages and Dr. Corrigan of Chapman College may publish the Systems Technology materials, for which he provided the conceptualization.

Program 50: Instructional Materials Development Program
Center for the Advanced Study of Educational Administration
Eugene, Oregon

Objectives. CASEA's Instructional Materials Development Program was established in June of 1969 because of growing evidence that new knowledge and techniques for increasing the effectiveness of school curriculum and instruction are not being readily applied to educational practice. The long-range goal of the program is the development of instructional materials to help public elementary and secondary school administrators in updating their knowledge and skills applicable to the organization and administration of schools. In order to upgrade the preservice and inservice education of school administrative personnel, the staff of Program 50 will be undertaking instructional materials development projects during the five-year period from 1970-1975 in three basic areas; (a) systems technology, (b) group processes, (c) information dissemination. The instructional materials under development by Program 50 should prove helpful to educational decision-makers at any level, whether they be teachers, administrators, board members, or parents and community representatives. However, the training will be most specifically aimed at district-level administrative personnel.

Developmental Activities to Meet Objectives. CASEA will develop four instructional packages on the use of new systems technology in educational planning, to assist school personnel in developing an integrated systems- and computer-based educational planning operation. The subjects of these four packages will be Planning-Programming-Budgeting Systems (PPBES), Advanced Educational Planning (including assessment of educational outcomes, cost-effectiveness analysis, and computer operations), Information Systems, and Integrated Systems Management. Secondly, the Program 50 staff will address itself to the provision of training to improve the group processes skills of school personnel. One training project, Improving Group Problem

Solving, will provide generalized training for teachers and administrators in increasing the effectiveness with which they function within organizational groups. The materials will train group members to deal, not only with the problems for which their group was organized, but also with the interpersonal problems that may arise. The second group processes project will provide specialized training for school personnel participating in particular groups, such as curriculum committees or administrative cabinets. The final project to be undertaken by Program 50 is Project Inform, a five-year information dissemination project that will supply school administrators with information derived from theoretical and empirical research which is applicable to practice. Through the production and dissemination of films, audio tapes, models and diagrams, as well as printed materials, Project Inform will enable school administrators to keep abreast of new developments through self-instruction.

PPBS Package. The most immediate objective of Program 50 is the development of an instructional package to train school personnel in the design, adoption, and operation of a Planning-Programming-Budgeting System in their schools. PPBS, when fully functioning, is intended to increase the efficiency of administrators' resource allocation decisions through systematic collection and analysis of information that will enable them to perform the following activities:

1. identify the district's educational philosophies, goals, and objectives;
2. translate these philosophies, goals, and objectives into organizational programs and subprograms that will achieve particular objectives;
3. examine the district's on-going activities to determine the current and desired inputs, processes, and outputs of each program;

4. generate alternative programs and strategies where significant discrepancies have been identified between the current and desired operations;
5. evaluate the generated alternatives through benefit-cost and cost-effectiveness analyses and select those programs and strategies which can be implemented with the greatest effectiveness and efficiency;
6. operationalize the selected alternatives, monitor their performance, and periodically evaluate the outcomes in terms of the district's objectives; and
7. recycle the entire PPBS sequence, based upon an analysis of the evaluative data.

However, Program 50 has rejected the idea of innovating PPBS by simply operationalizing the seven steps outlined above in a step-by-step fashion. They reject this as a feasible implementation strategy because of such factors as (a) the time consumed in attempting to identify all district philosophies, goals, and objectives from the beginning, (b) the many possible program structures, (c) the inadequacy of currently available input data for producing program-structured documents, and (d) the current lack of measurement devices for accurately determing outputs. Rather, the approach employed in the CASEA instructional materials for innovating PPBS in a public school system assists school personnel in moving gradually from a planning, budgeting, and accounting system which is essentially activity-oriented to one which is increasingly objective-oriented. Six sequential phases are specified through which school district personnel should progress over a five- to ten-year period:

1. Preparation by school district personnel of a Total Direct

Cost Activity Matrix (TDCAM) document which presents all costs of all on-going activities in the school district for a specified period of time.

2. Mathematical manipulation of the dollar cost data presented in the district's TDCAM document developed in Phase One so that school district personnel can compare and project past and future costs of on-going activities.
3. Development of a wide range of mini-PPB Systems or operations, each of which is relatively limited in scope, consists of activities already defined in the district's basic TDCAM document, and involves district personnel in program input-output analysis, planning and evaluation.
4. Initiation, if not already begun, of a district-wide effort to define the major philosophies, goals, and objectives which either do or should guide the school district's activities.
5. Development of a PPBS operation which is focused upon a limited number of the most significant objectives of the school district and which involves district personnel in the processes of programming, planning, implementing, and evaluating the district's efforts to achieve those particular objectives.
6. Development and refinement of a PPB System which attends simultaneously to a maximum number of programs, program objectives, and program strategies.

In addition to this implementation strategy, the CASEA instructional package will focus in depth upon a conceptual framework for PPBS, including its major activities, processes, and potential outcomes; program budget development and manipulation; and program planning and evaluation, including aspects of benefit-cost and cost-effectiveness analyses.

Use of Training Materials. The instructional package will be designed for use in preservice and inservice education of school administrators. The PPBS training workshops will employ simulations and field experiences, as well as traditional instructional presentations making use of both audiovisual and printed materials that the trainees may keep for use in their local districts. Approximately forty hours of instruction will be provided, and the intention will be to equip the trainees to not only comprehend, but also perform the tasks being taught. The materials will be designed for presentation in a prescribed sequence and will require a skilled instructor to present them at the workshops. Most likely, these instructors will be drawn from the staffs of universities and regional educational laboratories. CASEA itself does not intend to provide direct training or dissemination of the materials it has developed. The instructional packages will probably be disseminated to schools of education, regional educational laboratories, and such organizations as the AASA National Academy for School Executives, the National School Development Council, and the University Council for Educational Administration for use in either preservice or inservice administrator training programs.

Testing. A prototype package of the PPBS training materials should be pilot tested in a workshop setting during the summer of 1970. These materials will undergo revisions and further testing during the fall of 1970, and will be mass produced for dissemination by the spring of 1971. Field testing of the PPBS package will be a joint effort by CASEA and Oregon Continuing Education. Discussions are also underway with the staff of the AASA National Academy for School Executives about the possibility of conducting a NASE seminar based upon CASEA's PPBS instructional materials. (In the meantime, the Program 50 staff will also be developing

instructional materials for the Improving Group Problem-Solving package, which they plan to pilot test in the fall of 1970 and disseminate in the fall of 1971). The evaluation of the PPBS instructional materials will examine the trainees' ability to generate data, the kinds of data they generate, and the uses to which they put this data. Simulation techniques will be used to test for the acquisition of these skills and, in addition, longitudinal studies will be carried out to determine what effects the instruction will have upon the functioning of the trainees when they return to their local districts. Eventually, CASEA hopes to develop diagnostic measures to assess trainees' possession of given skills on a pre- and post-basis.

The activities of the Instructional Materials Development Program will entail $130,000 through the end of 1971. The program currently employs a staff of 2.5 professionals and 2.5 graduate assistants. Plans call for the expansion of the staff to include a media expert and an operations research specialist.

Wisconsin Research and Development
Center for Cognitive Learning
Madison, Wisconsin

The Multiunit School. The Wisconsin Research and Development Center for Cognitive Learning has developed an organizational structure for elementary schools that permits the conduct of research under natural classroom conditions. The R & D Center designed the structure to provide a realistic operational setting in which to conduct development-based research underlying the products of its Individually Guided Education program. The organizational structure is the Multiunit School, in which the teaching staff is organized into Instruction and Research Units (I & R Units) consisting of a Unit Leader, several staff teachers, instructional aides and perhaps a teaching intern. Each I & R Unit serves 100-200 pupils. The I & R Unit permits the teaching staff to engage in one additional activity besides instruction, whether it be research, teaching training, etc. Unit Leaders are free one-fourth to one-half of their time for planning and research activities, while the remaining Unit teachers have several hours of release time each week during which they can meet and plan their instructional activities as a team. The Unit Leaders monitor the treatments, familiarize their staff teachers with the research techniques being used, and serve as liaison between the Unit, the school management and the R & D Center.

Each Multiunit School is headed by an Instructional Improvement Committee (IIC) composed of the building principal and the Unit Leaders. This group is responsible for planning, managing, and evaluating the entire school program, including ongoing research projects. The IIC is the agent within the Multiunit School which identifies problems for which solutions may be found through research. Members of the IIC work in

conjunction with consultants in planning and evaluating the results of school-based research projects.

R & D Activities in the Multiunit School. The I & R Units provide a means whereby the R & D Center can verify the quality of its curriculum products by conducting controlled field trials. Pupils can be randomly assigned to treatments and teachers can be rotated among treatments and among students, so as to avoid possible confounding effects of teachers upon treatments. Multiunit Schools currently provide field sites for the testing of parts of two major curriculum packages (Reading and Mathematics) and three smaller packages (Creativity, Motivation, and Computer Management), which together compose the R & D Center's Individually Guided Education curriculum at its present stage of development.

During the first year of establishment of the Multiunit School structure, participating school staffs were required to identify researchable problems and to conduct their own research with the assistance of the R & D Center. In order to enable the teachers to perform these functions, the R & D Center sponsored an eight-week summer session on research methodology. Subsequent to this initial experience, however, the R & D Center decided that the provision of the training for the R & D Unit teachers was not consistent with the Center's mission and the requirement of teacher-conducted research was therefore discontinued. Since that time, the name of the Unit has been changed from Research & Instruction Unit (R & I Unit) to Instruction and Research Unit (I & R Unit), in accordance with the participating teachers' feeling that conduct of research had been overemphasized and that instruction should be the foremost activity of the Unit organization.

The R & D Center purports that the Multiunit School structure will bring the teaching staff into contact with the R & D process. By

participating in field trials of new curriculum products, I & R teachers acquire first-hand evaluative information on which to base decisions regarding adoption of the new products. The Multiunit School can serve as a local demonstration school within its district, so that other schools can learn about the innovations being tested and the feasibility of adopting them. As a result of the success of the I & R Unit structure, the R & D Center has recently instituted Instruction and Development Units in four Multiunit Schools which have worked closely with the staff of the R & D Center for several years. The teaching staff of these "developmental" schools is actually able to participate in the generation of, as well as the use of, research findings. Pilot tests of curriculum packages under development at the R & D Center are conducted by the "developmental" schools. Members of the IIC provide input to the staff of the R & D Center by which the packages can be revised, and sometimes act as developers by assisting in the preparation of supplementary materials such as teacher's manuals and inservice videotapes.

In addition to the Multiunit Schools which participate in the development and testing of products for the Individually Guided Education program, the R & D Center knows of 55 additional schools that are testing or adopting the I & R Unit structure without any consultative assistance from the staff of the R & D Center. It is apparent that not all of these units are pure versions of the Wisconsin model. The R & D Center provides no supervision to these schools, but does disseminate to them a bi-monthly newsletter published by its staff.

Inservice Training Materials. The Wisconsin R & D Center has recently arranged with the Institute for the Development of Educational Activities (I/D/E/A) for the development of teacher inservice training materials for the installation of the Multiunit School and of Individually

Guided Education. I/D/E/A negotiated a subcontract with a Chicago production firm for $250,000 for the production of the training materials, which will bear I/D/E/A's copyright. The materials will be developed by the staff of I/D/E/A based upon the R & D Center's conceptualization for the Multiunit School and for Individually Guided Education. The agreement between the R & D Center and I/D/E/A specified the formation of a three-man team, composed of representatives of I/D/E/A and the R & D Center and one external person, to oversee the development and testing of the training materials. Several I/D/EA staff members will be involved with the installation and subsequent field testing of the training materials.

The training materials are being designed for use with Multiunit School personnel. I & R Unit Leaders and Multiunit School principals will first use the materials and subsequently present them to staff teachers in a three to five-day inservice summer session. Individually Guided Education is the focus of the training materials, which will cover (a) assessment procedures (specifically, use of diagnostic and criterion tests to measure each child's attainment of the specified behavioral objectives), (b) ad hoc instructional grouping to facilitate the attainment of specific objectives, and (c) reassessment procedures. Also included will be an introduction to the I & R Unit operations and to the roles of the various participants, and a principal's handbook. The training will be packaged in a flexible format and will consist of four books, four movies, and four filmstrips. Programmed, or self-instructional materials and simulations will be used.

By April 15, 1970, the prototype training materials will be completed and an initial plan for their testing and installation developed. These materials will be pilot tested at the beginning of the 1970-71 school year. Approximately fifty schools in Wisconsin will participate in the testing

under prescribed conditions. More flexible use of the materials will be made in situations where multiunit operation and individually guided education are already proceeding smoothly. Evaluation of the training materials will be conducted by staff of the R & D Center.

Knowledge Utilization: Conception and Measurement
Center for Research on Utilization of Scientific Knowledge
Ann Arbor, Michigan

CRUSK Products. The staff of the Center for Research on Utilization of Scientific Knowledge (CRUSK) is developing a number of programs in different fields (education, medicine, community psychology, business and industrial organizations, etc.) which have the general aim of linking research and theory from the social sciences to social practice. The Knowledge Utilization: Conception and Measurement program focuses specifically on the study of knowledge utilization as a social process. Its staff is primarily engaged in developing and testing conceptual models of knowledge transfer and utilization as they apply in education and other fields such as highway safety. Current projects have evolved from a major review of the knowledge utilization literature conducted from 1967 to 1969. This review, funded by the U.S. Office of Education Research Utilization Branch, has identified a number of testable models and new researchable issues to guide future research and development in his field.

The following products have resulted from the literature review:

1. A 4000-item bibliography entitled Bibliography on Knowledge Utilization and Dissemination.
2. A review of the literature entitled Planning Innovation Through Dissemination and Utilization of Knowledge: A Comparative Survey and Theoretical Analysis of the Literature.
3. A booklet entitled Major Works on Educational Change, describing approximately forty documents.
4. A manual on the change process which is currently under development.

Change Process Manual. This manual is being designed for the "educational change agent," a role which may be occupied by a person at any level in education including intermediate unit administrators, district level administrators, classroom teachers, or even students. It will be written in layman's language, in order to attract the broadest possible range of readership. The major emphasis in the manual, which will be entitled "A Guide to Innovation in Education," will be upon the principles of planned change, rather than the specific skills required. To make the decision-making process more rational, a problem-solving approach to educational change is used. This approach involves six sequential steps, to each of which a chapter of the manual is devoted:

1. Building a Relationship,
   (Who is the client? . . . What is your relationship at the very beginning? . . . Inside or outside? . . . The ideal relationship . . . No-go situations . . . How to size up your relationship.)
2. Diagnosis: From Pains to Problems to Objectives.
   (How do you make a good diagnosis? . . . How to make a diagnosis: some pitfalls.)
3. Acquiring Relevant Knowledge.
   (Seven major purposes for resource retrieval: Diagnosis, Awareness, Evaluation (before trial), Try-out, Evaluation (after trial), Installation, and Maintenance . . . Three acquisition strategies: acquiring diagnostic information, building and maintaining awareness, homing in on a solution . . . Building a permanent resource acquiring capability.)

4. Choosing the Solution.

   (Deriving implications from research . . . Generating a range of solution ideas . . . Feasibility testing . . . Adaptation.)

5. Gaining Acceptance.

   (How individuals accept innovations . . . How groups accept innovations . . . How to communicate . . . Keep your program flexible.)

6. Stabilizing the Innovation and Terminating the Relationship.

   (Insuring continuance . . . Creating a self-renewal capacity . . . Disengagement.)

Eventually, performance checklists for each of the chapters will be developed, so that users can check their progress. Performance objectives for the manual have not been explicitly stated, but users who have "successfully" completed the exercises in the manual would be expected to demonstrate, through applications in their work, the principles and steps outlined in the manual. For example, a demonstration of successful completion of the Diagnosis chapter might involve a close working relationship with the client system in order to arrive at a carefully defined diagnosis of the problems rather than attempting to "sell" a given approach or product.

Use of the Manual. Presently, the instructional materials are limited to the printed manual. Eventually, when funding can be obtained for the production of film to replace the functions performed by the trainer, the manual will be a self-contained training package. CRUSK hopes to have the manual commercially published. The manual is being designed for use in summer workshops and similar sessions, which will require the equivalent of one week full-time to complete. Simulations and role playing, as well as self-instruction and workshop techniques

will be employed and a trainer will be required to present and interpret the content of the manual. Initial workshop sessions in the spring of 1970 will be conducted by the project director and staff. Workshops are planned for the summer of 1970 in which external educational institutions will assume the training role.

Four potential sites for the training in change agentry have been specified: state departments of education, Title III centers, regional educational laboratories, and schools of education. CRUSK believes that state education departments would be most receptive to offering the training and that state departments and Title III centers would be most likely to employ trained agents.

Evaluation of the Manual. An early pilot of the change process manual has been reviewed for CRUSK by a dozen so-called "change agents." The current draft of the manual is now being field reviewed by 100 people representing the four different groups of potential users listed above. The feedback from these reviewers will be largely of a subjective nature. No attempts are now being made to gather hard data on the effectiveness of the manual. A draft should be available for limited distribution by May, 1970. Final publication is not expected until the end of 1970.

The change process manual cannot be subjected to a formal, objective evaluation until it is being used in the context of a training session. By May, 1970, CRUSK will sponsor a conference which will consider the development of and viable settings for training programs in change agentry. CRUSK has received funding for this planning conference, and for some further development of the training materials. CRUSK plans to prepare an outline of potential training programs and proposal for funding of their development by June, 1970.

CRUSK has received $100,000 from the Research Utilization Branch of USOE for the conduct of its various knowledge utilization studies over a three-year period. Approximately $50,000 of this has been channelled into the development of the change process manual. Somewhat more than two man/years of staff time is being devoted to the development of the manual. This time includes the partial services of the following personnel: one Ph.D., one M.A., one B.A., and one secretary.

The Research Corporation of the Association of School Business Officials Chicago, Illinois

The ASBO Project. The Research Corporation of the Association of School Business Officials claims that the legislatures of more than three-quarters of the nation's states are currently either considering some kind of plan for PPBES (Program Planning-Budgeting-Evaluation System) at the state level or have already mandated one. In response to these demands, ASBO initiated a project in June, 1968, to design an integrated PPBE system for local school systems. The goal of the ASBO project, which is funded by a three-year USOE grant, is to improve management of educational and financial resources by determing the quality and costs of the products of education. Three major outcomes have been specified for the project: (a) the development and dissemination of a conceptual model of program planning-budgeting-evaluation for use at the system-wide level of local school administration; (b) demonstration of operational systems in public school systems; and (c) encouragement of other local school systems across the nation to investigate and use the model developed.

Educational Resource Management Design. ASBO's conceptual model, a form of PPBES, is called Educational Resource Management Design. The emphasis of the model is on management by objectives. ERMD consists of four parts, all of which provide input to the on-going processes of Planning and Decisioning.

1. Planning. The planning phase consists of the generation of objectives concerning what the school must do in order to fulfill its social responsibilities. Problems must be identified and defined, tentative priorities established, broad objectives specified and screened for relevancy to societal needs, to learner needs, and to educational philosophy, and 8 to 10

specific objectives developed for each broad objective.

2. Programming. This second phase consists of the generation of alternative sets of activities and services designed to meet the objectives that the school has specified. ERMD envisions that about three alternative programs will be developed for each specific objective. The alternative programs must be analyzed for cost-effectiveness, and the optimum program selected and divided into sub-programs. The sub-programs must then be assigned to one of five program categories: instructional-general, instructional-exceptional, instructional-support, noninstructional-support, and community service.

3. Budgeting. The budgeting aspect of ERMD is concerned with the reconciliation of programs and available resources, according to established priorities. It includes accounting and reporting tasks, as well as the preparation of the budget document.

4. Evaluation. The idea of accountability enters at the evaluation phase, in which both objective and subjective measures are developed of progress being made and of outputs of the program relative to the attainment of the specified objectives. In the ERMD model, pupil performance is evaluated at interim points as well as at the end of the program, and evaluation encompasses support programs and services as well as instructional programs.

What ERMD will do for Schools. Educational Resource Management Design is intended to serve as a model of what schools should be doing in order to plan for and evaluate their allocation of resources. ASBO does not intend to stipulate how schools should implement this conceptual design. The developers of the ERMD model forsee that implementation of the

model by a school system may require three to five years. Yet, they advise that schools begin immediately to consider alternative objectives for their students and alternative programs to meet those objectives.

The ERMD model, in its present prototype form, has been exposed to school administrators solely through slide presentations in conference settings. The model has been presented at seven ASBO regional conferences, at university institutes, and at a clinic of the National Academy for School Executives. These conferences and institutes serve as developmental test sites. Structured questionnaires are given to all participants to aid in the evaluation of the conceptual design. Respondents are queried about the probable reaction of various groups to ERMD, about their agreement with various assumptions held by the designers of ERMD, about implications and problems connected with adoption of ERMD by a school system, and about provision of inservice training to develop the skills requisite to effective operation of ERMD.

How ERMD will be Available to Schools. The ERMD slide presentation will probably be made available to outside groups for use at conferences and universities. The basic text of this presentation is also included in the "Report of the First National Conference on PPBES in Education - June 10, 1969," an ASBO publication. When a more sophisticated version of the ERMD model has been developed, more extensive printed materials will be prepared and published. ASBO's present chapter outline for the final documentation of the model includes the following major topics: Conceptualization of the ERMD, Planning, Programming - Analysis of Alternatives, Budgeting, Evaluating, Organizing for Implementation, Intra-State and Inter-State Problems, and Implications. The final form of the model and its documentation must be completed by June 30, 1971, the termination date of the project. Professional conferences and institutes

will probably also serve as the major means of dissemination of the Educational Resource Management Design in its final form.

Resources. The personnel resources available for the development of the ERMD include a professional staff of four. In addition, ASBO has enlisted the participation of several school districts that will be serving as pilots during the developmental process. These pilot districts include: Dade County, Florida; Clark County, Nevada; Douglas County, Colorado; Herricks, New Hyde Park, and Long Island, New York; Memphis, Tennessee; Milwaukee, Wisconsin; Montgomery County, Maryland; Peoria, Illinois; and Westport, Connecticut. Having pilot districts of various types and sizes located in different parts of the country will be useful to the ASBO project both in supplying evaluative feedback and in serving as dissemination sites for the Educational Resource Management Design.

The National Academy for School Executives
American Association of School Administrators
Washington, D.C.

Objectives. The National Academy for School Executives is a national post-graduate institution which aims to provide inservice opportunities for the continuing professional development of practicing school administrators. The Academy model was developed by the AASA Committee for the Advancement of School Administrators, supported by a $50,000 planning grant from the U.S. Office of Education. NASE was formally established on January 1, 1969, and the first inservice program was conducted in June, 1969.

The mission of the National Academy is to design inservice programs addressing current pressures and challenges that face school administrators. NASE attempts to fill a gap in the training of school administrators by offering programs on topics of emergent interest to administrators which are not being dealt with elsewhere. It is hoped that, as a result of participation in NASE programs, school executives will (a) remain alert and comprehend the crucial issues confronting education, (b) stay abreast of and develop the skills necessary to implement current technological and other innovations, and (c) have an opportunity for self-renewal through a wide variety of meaningful experiences.

Seminars and Clinics. To accomplish this mission, the Academy developed a training model consisting of 3 components. The first component, short-term problem-oriented seminars and clinics, is the only one of the 3 components which is currently operational. The seminars and clinics last from five to eight days. Enrollment is open to school administrators across the country, and this eligibility extends to any practicing administrator in any public or private educational institution (e.g. superintendents, assistant superintendents, business managers, directors,

supervisors, and principals). Graduate students and persons not holding administrative positions are not admitted to the Academy programs. In practice, 75-80% of the participants have been K-12 public school superintendents or assistant superintendents, while no more than 10% have been school building principals. Over half of the participants, which numbered 351 during 1969, have held doctoral degrees. The seminars and clinics are held in metropolitan centers or in resort areas in all parts of the country. The emphasis, in selecting program sites is upon obtaining "comfortable" settings that are distinctly different from the school administrator's typical environment. The NASE staff, in consultation with recognized experts, develops the materials for the training programs and coordinates the programs on site. The actual instruction is performed by recognized experts, including many university professors, who are recommended to NASE by the AASA membership.

To illustrate the range of topics being covered, the following 13 programs will be offered during winter and spring, 1970:

1. Administrative Responses to Student Activism and Vandalism;
2. Innovations in School Staffing and Organizational Patterns;
3. Administrative Responsibilities for Staff Evaluation and Productivity;
4. Negotiations and the School Administrator;
5. Human Factors in the Improvement of Educational Administration (sensitivity training);
6. Politics and Power Structure Analysis for the School Executive;
7. School Board-Superintendent Relationships in Times of Continued Conflict;
8. Innovative Approaches to Metropolitan Educational Facilities Planning and Design;

9. Administrative Information Technology and More Effective Decision-Making;
10. Dissent and Disruption in Education Operations;
11. Instructional Technology and the School Executive;
12. Program Budgeting (PPBS), A Resource Allocation Decision for Education;
13. Long Range Educational Planning and Futures Determination for the School Executive.

Programs 5, 9, 12 and 13 appear to be particularly relevant to the subject of the conference, educational planning and management.

Each seminar schedule employs a three-stage design beginning with conceptualization of the problem, followed by practical applications and work sessions. The instructional techniques include simulations and group practice as well as lectures. The NASE instruction is not self-contained and can be acquired by school administrators only at the official NASE seminars and clinics. However, the NASE staff can vary the presentation of its materials to best suit the needs and interests of particular groups. Each participant receives a notebook that includes a bibliography on the problem area, major articles and booklets, and work-sheets for use during the laboratory sessions. Also available to participants during the period of the seminars and clinics is a 25-50 volume "mini-library" housed on the clinic site. When the Academy model is fully functioning, at least 30 such programs will be conducted annually.

Long-Term Programs. The second component, which will be under development during 1970, will consist of long-term residential programs addressing broader topics such as systems concepts in planning and management, and skills for projecting needs and planning to meet them. Participation in these programs will be by invitation only, and will

involve an extended period of residence at the program site ranging from six weeks to six months. NASE may acquire centers of its own to serve as sites for these residential programs. These long-term training programs will emphasize leadership development and their content should be quite distinct from courses offered in university programs. The first programs of the second component will probably be offered in fall of 1971.

The Academy Center. An educational "think tank" will constitute the third component of the Academy. Called the Academy Center for Creative Explorations in School Administration, it will involve both academicians and practitioners in the generation of new and practical ideas for educational management. To date, only the concept for this third component exists. The services that the Academy Center will provide to practicing administrators will be more indirect than those offered by the first two components. The Center staff will not offer training, but will disseminate information about new developments in school administration.

Program Development and Evaluation. Newly-developed seminar programs are conducted on a pilot basis with only NASE staff members participating. The programs are evaluated and revised by the staff before their first official administration with school administrators. At the end of each seminar and clinic, participants complete an evaluation form rating the content of the program, the professional staff, and the instructional methods used. Revisions are made, on the basis of these evaluations, before subsequent offerings of the program.

The Academy is staffed by a professional staff of five and a clerical staff of four. NASE is headquartered in the NEA building in Washington, D.C. Each seminar program costs NASE approximately 2-3 man/weeks for planning and designing the instructional materials, plus travel, telephone and consultant expenses. The Academy draws upon several sources

for support. Revenue is received from the seminars on the basis of a $190 fee for a five-day program. The charge for programs lasting longer than one week ranges from $225 to $280. A two-year R & D grant from the U.S. Office of Education for $157,000 was received in mid-1969. This grant will support both the refinement of the first component programs and the initial design of the second component residential programs. An $85,000 EPDA grant for July 1969-1970 was awarded jointly with the Alexandria, Virginia, Public Schools to create an administrator inservice education consortium. And NASE's parent organization, the American Association of School Administrators, has allocated $100,000 from its Reserve Fund to cover any operational deficits which might be incurred during the first three years of the Academy's operation (1969-71).

NASE publishes a catalog of all current Seminar and Clinic offerings, which is disseminated to all members of the AASA. In addition, special flyers are prepared to notify particular target groups of pertinent programs. A network of State Academy Leaders has now been formed for the purpose of promoting NASE and its programs within each state and identifying new training needs or topics of concern for which NASE can design new programs. The network was formed by writing to the presidents and executive secretaries of state associations of school administrators. They were asked to nominate three persons from their association who might fill this state leadership role. Out of 39 states which have been contacted to date, 37 State Academy Leaders have been chosen.

Operation PEP:
A State-Wide Project to Prepare Educational Planners for California
Office of the San Mateo County Superintendent of Schools
San Mateo, California

Objectives. The goal of Operation PEP is to improve educational planning and management in order that the quality of education offered to California's school children will be improved. Operation PEP's efforts to reach this goal include (a) the adaptation of systems concepts and techniques, which have been developed in government and industry, for use in educational administration, and (b) the development of instructional materials to train school administrators in the application of these concepts and techniques. The San Mateo Office of the County Superintendent of Schools is the local agency administering the project, which is funded under a four-year Title III ESEA grant for $300,000 per year. The 58 county education offices in California, as well as the State Department of Education, were involved in the initial planning for the project. The project is conducted by a professional staff of six.

PEP Training Program. The Operation PEP training is now being presented to California school administrators through group training sessions conducted at PEP headquarters. The sessions are built primarily around lectures, but lectures are interspersed with group discussion sessions and workshop sessions in which participants have an opportunity to practice practical applications of the skills. The instructional materials include slides, transparencies, and other audiovisual aids as well as printed materials. Operation PEP staff members who have familiarized themselves with knowledge concerning the system approach as applied in the fields of government, industry and education serve as instructors at the training sessions. The sequence of the training units is predetermined and all participants take the entire series of units. The PEP program is designed

to involve the participants for one full school year. The training sessions themselves require about 30 full days of instruction. Generally, participants receive three days of training at a time. Training sessions are arranged to encompass a week-end plus either the preceding Friday or the following Monday.

Training Content. The Operation PEP training program being conducted during the 1969-70 school year consists of eight units:

1. Analytical Framework for Educational Planning and Management

   An adaptive model of K-12 education in California is used as the basis for analyzing the structural and functional aspects of educational organization and management. The following dimensions of the model are analyzed:

   a. Societal relations: the values, goals and purposes of society as related to education
   b. Behavioral transformations: the changes in pupil behavior which are to be brought about by the school
   c. Operational functions: the activities carried on by the school

2. Performance Objectives

   By referring to the analytical framework, the processes for setting objectives in educational organizations are analyzed. Participants are trained to manage the objective-setting process and to derive, specify and appraise the adequacy of educational performance objectives.

3. Mission, Function, Task and Methods-Means Analysis

   Using the analytical framework and the objective-setting skills which they have developed, participants analyze the mission, functions, tasks, and methods specified in each performance objective.

4. Operation Mapping

   Using function flow block diagrams developed as a result of mission, function, task and method-means analysis, participants develop operation maps or strategies for human involvement.

5. Network-Based Management Procedures

   Participants develop and use network-based management procedures including (a) Planning, Evaluation and Review Technique - PERT; (b) Critical Path Method - CPM; (c) Line of Balance - LOB; (d) Gantt Charts; (e) Milestone Charts; and (f) Flow Process Charts.

6. A System Approach to Educational Management and Problem Solving

   Participants learn to analyze and develop management plans for educational organizations.

7. A System Approach to Policy Making and Organizational Development

   A rationale for public policy decision-making related to education is presented. Participants analyze and develop management plans which support public policy decisions promoting the continuous renewal of education and educational organizations.

8. Planning, Programming, Budgeting Systems

   Participants study the use of PPBS as a tool for basic public policy decision-making, and examine the interrelationships of setting objectives, planning programs, budgeting resources, managing performance and evaluating outputs.

Diffusion of PEP Training. In addition to the actual training sessions conducted by Operation PEP staff members at PEP headquarters, it is hoped that PEP trainees will serve as consultants and trainers for district personnel who did not themselves participate in the PEP training sessions. Selected PEP participants receive instruction in the use and presentation

of the PEP instructional materials, so that they can return to their own districts or agencies and initiate training sessions in the systems approach to educational planning and management. PEP will also send teams of experts out to districts, county offices, and other agencies to assist them in using systems techniques for specific planning at the local level.

A second approach to utilization of the PEP training is now underway. The content of each unit in the training sequence will be condensed into booklet form which will be published and made available at cost to any interested person or organization through the San Mateo County Office of Education. Altogether, there will be ten to twelve training booklets, which districts will be able to use in any manner or sequence which they desire. Four of these booklets have been completed and are already in print: Managing Change, Manager's Guide to Objectives, Goals for Public Education in Texas, and A Profile of Cognitive Development in Children. The remainder of the training materials have been developed and should be published by the summer of 1970.

Target Population. The PEP training materials are written at a fairly high level of sophistication, as they deal with the application of system technology to educational decision-making and management. The PEP training program has been designed primarily for top level administrators, including district superintendents, assistant superintendents, and directors, supervisors, and coordinators from districts and county offices throughout California. However, portions of the training are also useful and applicable at the classroom level, at the school building level, and at the state department level. Selection of participants for the training program is based upon a formula which gives high weight to administrators from inner city or urban areas, to those who manage direct service facilities

for children, and to those individuals having the highest level decision-making positions within the agency represented. To date, 450 key administrators from throughout California have participated in the PEP training.

Upon completion of the training program, participants should be able to (a) specify performance requirements, specifications, criteria and objectives, (b) develop plans, strategies and procedures based upon those requirements, specifications, criteria and objectives, and (c) apply a functional knowledge of the methods, techniques, and procedures of a system approach to educational planning and management.

Evaluation. The Title III ESEA funding for Operation PEP terminates on June 30, 1970. By that time, in addition to the publication of the remaining training units, the PEP staff must complete the field testing of and subsequent consultation with school districts about these new materials, and the evaluation of Operation PEP's effectiveness. PEP training participants have been providing pre- and posttest performance measures for the project evaluation throughout the training program. The test items require the participants to define and demonstrate various system techniques by applying them to practical educational problems. Following the training program and after the trainees have become reimmersed in their jobs, the PEP staff asks the participants to evaluate the training program and whether it has helped them in their jobs. The immediate supervisor of each participant is also contacted for an evaluation of what noticeable effects the PEP training has had upon the skills of the trainee and upon the planning and management of the district or agency.

Project on Evaluation of the Elementary School Program
California Elementary School Administrators Association
Long Beach, California

Evaluation Guidelines. The California Elementary School Administrators Association has undertaken a three-year study to develop evaluation guidelines for the elementary schools of California. The study was initiated as an attempt to meet the challenge that public school administrators be held accountable for their schools' operations. The ultimate goal of the project is the design and implementation of a training program that will develop administrators' skills in the use of evaluation data to make decisions regarding individual school teaching and learning programs. The evaluation guidelines would assist administrators in determing what questions must be asked in assessing the adequacy of their school's structure and its functions, what information is needed to enable them to answer those questions, and how that information can be collected and analyzed. The evaluation which CESAA envisions would focus on outputs rather than inputs, on learning rather than teaching. It would attempt to move away from exclusive reliance upon standarized tests and to provide answers to questions such as:

What is happening to individual students?

To what extent is the community involved in establishing goals?

To what extent are teachers involved in policy making regarding instruction?

To what extent are administrators involved in policy making?

The Project on Evaluation of the Elementary School Program was initiated in August of 1969, and is still in the planning stage. Many final decisions regarding the form and content of the training materials, the length and location of the workshops, and the selection of trainers

for the workshops are yet to be determined by the advisory panel for the project. CESAA does not plan to present school districts with a ready-made program for evaluating the elementary school, but rather to involve districts in the actual development of the program. The cooperation of approximately 70 California public school districts, encompassing approximately 120 elementary schools, has been enlisted to date Participating school district representatives have attended orientation meetings and have completed several needs assessment questionnaires. Goals and objectives for the evaluation guidelines will be derived from an analysis of the needs assessment data.

The evaluation guidelines will be designed for use by elementary school building level administrators, district office staff, and classroom teachers. CESAA foresees that the application of the guidelines in a public school will be the joint responsibility of a school-wide planning team, although some of the evaluation procedures may be used by individual staff members and others by members of the community.

Objectives. The tentative objectives which the Evaluation Project staff is attempting to attain by the conclusion of the project, in September, 1972, include: (a) the operation in one or more Project districts of at least four procedural models (which have been validated in terms of changes affecting learners made as a result of their use) for definition, evaluation, and revision of elementary school programs, and (b) the use of two of these models in at least 30% of the elementary schools in each member district. School principals and district personnel will have received training in program development and in evaluation, as a result of which every Project school will be devoting at least 10% of its total operational effort to task force activities utilizing a localized version of one of the Project evaluation models, and will be able to

document a continually improving level of learner achievement over multiple assessments of the school program. Trained principals will be involving their teaching personnel in the derivation of program, curricular, and instructional objectives.

Evaluation Training Kit. Eventually the evaluation guidelines should be packaged in self-contained training kits. The training kit is being designed for CESAA by the Center for the Study of Evaluation at U.C.L.A. It will include approximately 150 objectives for student performance in grades K-6 along with appropriate performance tests, rated from "good" to "lousy." The primary means of orienting elementary administrators to the evaluation procedures will be through CESAA-sponsored workshops employing the training kits. The workshops, which will probably run for four or five days, may be held on university campuses, in hotels, or at regional educational laboratories. CESAA hopes to arrange for elementary school personnel to pay university fees and receive university credit for participation in the workshops.

CESAA plans to have an initial version of the evaluation training kit ready for field testing in a small number of schools during the spring of 1970. The field test and evaluation will be conducted by the Center for the Study of Evaluation at U.C.L.A. The initial workshops employing the CESAA evaluation materials are scheduled for August of 1970. Consultants will conduct the summer sessions, which will deal with Systems Analysis and Leadership Effectiveness Training. The summer workshops will be followed-up by two sessions in the fall. Development and implementation of the guidelines will continue through September, 1972. In addition to the publication of training kits and the administration of instructional workshops, information about the guidelines will be disseminated throughout California through CESAA area and regional meetings and through

CESAA publications.

Resources. CESAA estimates that the cost of the Evaluation Project will total $300,000 over the 36-month period. The project is being funded by the participating public school districts. The contribution for each participating school is $600 for fiscal year 1969-70, and will increase to $1,000 for the second and third years of the project. Full-time staff assigned to the Evaluation Project consists of the Project Director and a clerical staff of two. However, this personnel time is supplemented by the assistance of a 12-man advisory panel and approximately 200 administrators and 1,000 classroom teachers from participating school districts. The Project staff has also solicited cooperation from the following organizations: the Institute for the Development of Educational Activities (I/D/E/A); the Research Department of the California Teachers Association; and California Title III PACE Centers.

The Joint Program in Educational Administration
School of Education and Graduate School of Business
Stanford University
Stanford, California

Objectives. A new offering at Stanford University this year is the Joint Program in Educational Administration being co-sponsored by the School of Education and the Graduate School of Business. The purpose of the program is to train a new type of educational administrator, with special competencies in planning, financial analysis, and community dynamics, to administer educational enterprises in urban areas. The three-year program culminates in the newly created Master of Educational Administration degree awarded jointly by the Graduate School of Business and the School of Education, and a doctorate from the School of Education. Included are two years of academic study built around an administrative core that draws upon relevant courses from the Business School's Master of Business Administration program, an internship in an urban social action agency or a local public school, and a dissertation on the application of a new administrative procedure to an on-going educational institution.

The Stanford faculty expects that graduates of the Joint Program will rise to top administrative positions in metropolitan public school systems, senior staff positions as policy or finance advisors to a public school superintendent, or executive positions in federal, state and local governments, foundations, educational research agencies, or institutions of higher education. Graduates should be able to implement long-range planning techniques, Planning-Programming-Budgeting Systems, new types of financial analyses, and so forth. They should be knowledgeable about the proper goals and objectives for an educational enterprise and how urban public agencies can respond to the desires of low income community groups. Candidates for the program will be selected from recent college graduates,

experienced teachers and educational administrators, and persons with work experience in social action agencies. About ten students will be admitted to the program each year. To qualify for admission to the program, a candidate must be accepted by both the Graduate School of Business and the School of Education, and then be selected by the Joint Program degree committee.

Course Requirements. To satisfy the requirements for the Master of Educational Administration (MEA) degree, Joint Program candidates must complete 90 quarter-hour units of credit, of which 45 units must be received from the Graduate School of Business. These 45 units must include an administrative core of ten courses which develop the candidate's managerial skills. Eight foundation subjects of business administration are taken during the first year of the program: Management Accounting, Business Economics, Management and the Computer, Organizational Behavior, Business Finance, Marketing Management, Operations and Systems Analysis, and Operations Management. The two additional business courses are normally taken during the second year. "Business, Government, and the Changing Environment" examines the interrelationships between various economic, power, and interest groups in our society through the study of major current issues. "Enterprise Direction," the integrative course for the Business School's MBA program, presents a methodology for administrators in planning and implementing an overall strategy for their organizations.

Only two courses are required by the School of Education for fulfillment of the MEA degree: the "Joint Seminar in Educational Administration" and the "Seminar on Poverty, Race, and Urban Education." Both are two-quarter seminars which were specifically designed for Joint Program students. The "Joint Seminar in Educational Administration" deals with application of the managerial techniques developed in the business

courses to specific problems of educational administration. Topics such as refinement in accounting procedures at various levels of education, the design of management information systems for education, mathematical allocation models applied to educational problems, developing evaluable educational goals, and human issues in educational administration will be considered. The "Seminar on Poverty, Race, and Urban Education" attempts to train administrators to deal effectively with the external environment of schools in the metropolitan setting. It will cover such topics as an analysis of urban poverty, poverty and educational policy, relationship of education to comprehensive solutions of urban poverty, organization and control of urban schools, racial and individual differences in an urban setting, and dehumanization processes in current educational institutions. Students are free to select courses from any University department in fulfilling the remaining unit requirement for the MEA. They are encouraged, however, to select courses which will meet requirements for the doctoral degree at the School of Education, so that all course work will be transferable. Courses in curriculum theory and evaluation, philosophical, psychological, and cultural foundations of education, school finance, and educational policy making will be elected by most MEA students. The MEA program requires no thesis or foreign language competency.

In addition to the requirements for the MEA degree, Joint Program candidates must satisfy a 135 quarter-hour unit requirement for the Ph.D or Ed.D from the School of Education. Since all the coursework taken to satisfy requirements for the MEA degree, including courses at the Graduate School of Business, is usually transferable to the doctoral program in education, students must only complete an additional 45 units. The doctoral program is basically designed to enable each student to

tailor his coursework to suit his interests and abilities. Although there are no required courses, each candidate is expected to take courses in four core areas of professional competence in education; (a) Studies in Curriculum, Instruction, and Administration; (b) Behavioral Science Studies; (c) Normative Studies (the ideological-historical-philosophical bases for evolving educational policies and aims); and (d) Inquiry Skills (the investigative skills required for dissertation research). Internship experience, specially designed reading programs, and individual research projects can be accepted for academic credit.

Internship Experience. All Joint Program candidates will participate in internships that have been individually designed depending on the candidates' experience and career goals. Internships may be served in a variety of public agencies: local public schools or urban junior colleges, model city agencies, juvenile delinquency agencies, civil rights organizations, OEO programs, regional office of the Department of Labor, and of Health, Education, and Welfare, offices of legislative analysts for the State Legislature, or local welfare departments. For recent college graduates, a teaching internship in a public school may constitute the most profitable experience, whereas, for experienced educators, the internship assignment provides an opportunity to develop a new alliance between educators and city planners, politicans, civil rights groups, industrialists, and operators of other social action agencies. The Joint Program committee has developed a revolving internship in conjunction with the Coro Foundation of San Francisco, which allows students to intern in four or five urban agencies. The internships are designed to involve the students in a wide variety of short-term assignments so that they can develop an understanding of the interrelationships between public agencies, rather than

restrict them to a specific research project.

Program Development. The Joint Program courses and materials are being developed by two Stanford faculty members from the School of Education and the Graduate School of Business, with the aid of two research assistants. The Joint Program faculty is currently developing a new type of course in an attempt to ammend the program's present over-emphasis on financial analysis. They are dissecting the core Business School courses into "mini-courses" that will teach only those portions of the subject that are relevant to educational administration. These "mini-courses" can then be combined to produce courses geared specifically to the needs of the Joint Program candidates.

Under provisions of the Education Professions Development Act (EPDA), the U.S. Office of Education provides financial aid for all students admitted to the Joint Program in Educational Administration. Tuition, a living stipend ($2400 for inexperienced educators, $4800 for experienced educators), and a dependent allowance ($600 per dependent for inexperienced educators, $720 for experienced educators) are included.

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PRESE

ORGANIZATION	SYSTEMS DEVELOPMENT	DEVELOPM: TRAINING IN PLANNING TECHNIQUES	TRAINING IN IDENTIFICATION OF NEEDS/PROBLEMS	TRAINING IN DERIVATION OF GOALS
1. COMMUNICATION PROGRAM, FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT	Instructional Planning and Management System, including self-contained training materials, information about organizational arrangements, and diagnostic measures. Target Group: K-12 district-level administrators Developmental Stage: Initial Planning	Instructional Planning training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 50-60 hours Developmental Stage: Initial Planning	Problem Analysis unit in Instructional Planning training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 15-20 hours Developmental Stage: Initial Planning	Goal Setting unit in Instructional Planning training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 15-20 hours Developmental Stage: Initial Planning
2. ADMINISTERING FOR CHANGE PROGRAM, RESEARCH FOR BETTER SCHOOLS, INC.	Comprehensive Planning Model, including planning manual, computer program, and training; and Problem-Solving Guide Target Group: K-12 classroom teachers, building-level and district-level administrators Developmental Stage: Initial Planning	Project Management training (planning and implementing new products, methods, or activities) Target Group: K-12 building-level and district-level administrators Format: Seminars Duration: 15-20 hours Developmental Stage: Initial Planning		
3. ADMINISTRATIVE AND ORGANIZATIONAL SYSTEMS PROGRAM, REGIONAL EDUCATION LABORATORY FOR THE CAROLINAS AND VIRGINIA	Computer-based data analysis methods for applying the systems approach to planning and decision-making, and College and University Management Information System Target Group: College and University administrators Developmental Stage: Initial Planning			Institutional Goals Inventory Target Group: College and University administrators Format: Instrument and Manual Developmental Stage: Initial Planning
4. PROGRAM 100, NORTHWEST REGIONAL EDUCATIONAL LABORATORY	Development of instructional systems to increase competencies for objective analysis of instruction and planned change and to provide support for continuous learning of school personnel Target Group: K-12 classroom teachers and building-level administrators Developmental Stage: Initial Planning. Field Testing		Training package on Research Utilizing Problem Solving Process (RUPS) covers diagnosis of classroom problems Target Group: K-12 classroom teachers Format: Self-contained materials Duration: 23 hours Developmental Stage: Field Testing	RUPS training package covers formulation of improvement goals Target Group: K-12 classroom teachers Format: Self-contained materials Duration: 23 hours Developmental Stage: Field Testing
5. PROGRAM 50, CENTER FOR THE ADVANCED STUDY OF EDUCATIONAL ADMINISTRATION		Advanced Educational Planning and Planning-Programming-Budgeting Systems (PPBS) training packages Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours each Developmental Stage: Initial Planning (PPBS package) and Proposed Development (Planning package)		
6. WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING				
7. CENTER FOR RESEARCH OF UTILIZATION OF SCIENTIFIC KNOWLEDGE	Development and testing of conceptual models of knowledge transfer and utilization Target Group: K-12 classroom teachers, building-level and district-level administrators Developmental Stage: Initial Planning-Field Testing		Guide to Innovation in Education includes chapter on Diagnosis Target Group: K-12 classroom teachers, building-level and district level administrators Format: Self-contained manual Developmental Stage: Field Testing	
8. ASSOCIATION OF SCHOOL BUSINESS OFFICIALS	Development, dissemination and demonstration of the Educational Resources Management Design, including planning, programming, budgeting, and evaluation processes Target Group: K-12 district-level administrators Developmental Stage: Prototype Stage			
		Seminar on Long-Range Educational Planning and Futures Determination Target Group: K-12 building-level		

7. CENTER FOR RESEARCH OF UTILIZATION OF SCIENTIFIC KNOWLEDGE	Development and testing of conceptual models of knowledge transfer and utilization Target Group: K-12 classroom teachers, building-level and district-level administrators Developmental Stage: Initial Planning-Field Testing		Guide to Innovation in Education includes chapter on Diagnosis Target Group: K-12 classroom teachers, building-level and district level administrators Format: Self-contained manual Developmental Stage: Field Testing		
8. ASSOCIATION OF SCHOOL BUSINESS OFFICIALS	Development, dissemination and demonstration of the Educational Resources Management Design, including planning, programming, budgeting, and evaluation processes Target Group: K-12 district-level administrators Developmental Stage: Prototype Stage				
9. NATIONAL ACADEMY FOR SCHOOL EXECUTIVES, AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS		Seminar on Long-Range Educational Planning and Futures Determination Target Group: K-12 building-level and district-level administrators Format: Seminar Duration: 5-8 days Developmental Stage: Operational Testing			
10. OPERATION PEP: A STATE-WIDE PROJECT TO PREPARE EDUCATIONAL PLANNERS FOR CALIFORNIA	Adaptation of systems concepts and techniques for use in school administration Target Group: K-12 district-level administrators Developmental Stage: Operational Testing	Training units on Analytical Framework for Educational Planning and Management; and Planning, Programming, Budgeting Systems Target Group: K-12 district-level administrators Format: Workshops and booklets Duration: 3-4 days per unit Developmental Stage: Operational Testing			
11. PROJECT ON EVALUATION OF THE ELEMENTARY SCHOOL PROGRAM, CALIFORNIA ELEMENTARY SCHOOL ADMINISTRATORS ASSOCIATION	Development and demonstration of at least four procedural models for definition, evaluation, and revision of elementary school programs Target Group: Elementary classroom teachers, building-level and district-level administrators Developmental Stage: Initial Planning				
12. SCHOOL OF EDUCATION AND GRADUATE SCHOOL OF BUSINESS, STANFORD UNIVERSITY					

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TABLE I

NT AGENCY EFFORTS TO IMPROVE EDUCATIONAL P

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MENT OF TRAINING FOR SPECIFIC EDUCATIONAL PLANNING AND MANAGEMENT SKILLS

TRAINING IN SPECIFICATION OF OBJECTIVES	TRAINING IN INFORMATION/RESOURCE RETRIEVAL	TRAINING IN SELECTION AMONG ALTERNATIVE SOLUTIONS	TRAINING IN COST-EFFECTIVENESS ANALYSIS	TRAINING IN DECISION MAKING TECHNIQUES	TRAIN BUDGETING AND MA
Objectives-Evaluation unit in Instructional Planning training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 15-20 hours Developmental Stage: Initial Planning		Instructional Programming training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 50-60 hours Developmental Stage: Proposed Development		Instructional Programming training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 50-60 hours Developmental Stage: Proposed Development	Instructional package Target Group: administrat Format: Self- Duration: 50- Developmental Developmer
					Project Manage (planning a new produc tivities) Target Group: and distri Format: Semin Duration: 15- Developmental Planning
Guidelines for constructing measurable institutional objectives Target Group: College and University administrators Format: Self-instructional manual Developmental Stage: Initial Planning	Manual for Implementing Model Data Collection Program; training packages for specific data gathering and processing methods, model developmental research designs, and technical manuals for systems analysis and programmers Target Group: College and University administrators Format: Self-contained materials Developmental Stage: Prototype stage				
		RUPS training package covers derivation of action implications from diagnostic data and design of action research projects Target Group: K-12 classroom teachers Format: Self-contained materials Duration: 23 hours Developmental Stage: Field Testing			Training pack Technolog analysis a techniques of classro Target Group teachers Format: Self Duration: 60 Developmental Planning
	Information Systems training package Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Proposed Development	Planning-Programming-Budgeting Systems (PPBS) training package Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Initial Planning	Advanced Educational Planning training package covers cost-effectiveness analysis Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Proposed Development		Planning-Program Systems (PPBS Target Group: and district-trators Format: Self-co Duration: c. 4 Developmental St Planning
	Guide to Innovation in Education includes chapter on Acquiring Relevant Knowledge Target Group: K-12 classroom teachers, building-level and district-level administrators Format: Self-contained manual Developmental Stage: Field Testing	Guide to Innovation in Education includes chapter on Choosing the Solution Target Group: K-12 classroom teachers, building-level and district-level administrators Format: Self-contained manual Developmental Stage: Field Testing			
	Seminar on Administrative Information Technology and More Effective				Clinic on Pro Target Group

versity Planning	Guidelines for constructing measurable institutional objectives Target Group: College and University administrators Format: Self-instructional manual Developmental Stage: Initial Planning	Manual for implementing Model Data Collection Program; training packages for specific data gathering and processing methods, model developmental research designs, and technical manuals for systems analysis and programmers Target Group: College and University administrators Format: Self-contained materials Developmental Stage: Prototype stage				
for- uals teachers rials sting			RUPS training package covers derivation of action implications from diagnostic data and design of action research projects Target Group: K-12 classroom teachers Format: Self-contained materials Duration: 23 hours Developmental Stage: Field Testing			
		Information Systems training package Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Proposed Development	Planning-Programming-Budgeting Systems (PPBS) training package Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Initial Planning	Advanced Educational Planning training package covers cost-effectiveness analysis Target Group: K-12 building-le el and district-level administr tors Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Proposed Development		Plan Targ Form Dura Deve
		Guide to Innovation in Education includes chapter on Acquiring Relevant Knowledge Target Group: K-12 classroom teachers, building-level and district-level administrators Format: Self-contained manual Developmental Stage: Field Testing	Guide to Innovation in Education includes chapter on Choosing the Solution Target Group: K-12 classroom teachers, building-level and district-level administrators Format: Self-contained manual Developmental Stage: Field Testing			
		Seminar on Administrative Information Technology and More Effective Decision Making Target Group: K-12 building-level and district-level administrators Format: Seminar Duration: 5-8 days Developmental Stage: Operational Testing		Seminar on Administrative Information Technology and More Effective Decision Making Target Group: K-12 building-level and district-level administrators Format: Seminar Duration: 5-8 days Developmental Stage: Operational Testing	Cl Tar For Dur Dev
	Training unit on Performance Objectives Target Group: K-12 district-level administrators Format: Workshop and booklet Duration: 3-4 days Developmental Stage: Operational Testing		Training units on Mission, Function, Task and Methods-Means Analysis; Operation Mapping; and Planning, Programming, Budgeting Systems Target Group: K-12 district-level administrators Format: Workshops and booklets Duration: 3-4 days per unit Developmental Stage: Operational Testing		Training unit on A System Approach to Policy Making and Organizational Development Target Group: K-12 district-level administrators Format: Workshop and booklet Duration: 3-4 days Developmental Stage: Operational Testing	Train wo Ma me An an Pr Target ad Forma Durat Devel Te
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TABLE I

OVE EDUCATIONAL PLANNING AND MANAGEMENT

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LLS					
AINING IN CTIVENESS ANALYSIS	TRAINING IN DECISION MAKING TECHNIQUES	TRAINING IN BUDGETING AND MANAGEMENT TECHNIQUES	TRAINING IN EVALUATION OF OUTCOMES	TRAINING IN IMPLEMENTATION OF INNOVATIONS	GROUP DYNAMICS/ INTERPERSONAL RELATIONS TRAINING
	Instructional Programming training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 50-60 hours Developmental Stage: Proposed Development	Instructional Management training package Target Group: K-12 district-level administraotrs Format: Self-contained materials Duration: 50-60 hours Developmental Stage: Proposed Development	Objectives-Evaluation unit in Instructional Planning training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 15-20 hours Developmental Stage: Initial Planning	Instructional Programming training package Target Group: K-12 district-level administrators Format: Self-contained materials Duration: 50-60 hours Developmental Stage: Proposed Development	
		Project Management training (planning and implementing new products, methods, and activities) Target Group: K-12 building-level and district-level administrators Format: Seminars Duration: 15-20 hours Developmental Stage: Initial Planning		Project Management training (planning and implementing new products, methods, and activities) Target Group: K-12 building-level and district-level administrators Format: Seminars Duration: 15-20 hours Developmental Stage: Initial Planning	
			Standardized decision documentation procedures for evaluating past decisions Target Group: College and University administrators Format: Self-instructional manual Developmental Stage: Initial Planning		
		Training package on Systems Technology covers systems analysis and synthesis techniques for the management of classroom instruction Target Group: K-12 classroom teachers Format: Self-contained materials Duration: 60 hours Developmental Stage: Initial Planning	RUPS training package covers evaluative assessment and analysis of action-research data Target Group: K-12 classroom teachers Format: Self-contained materials Duration: 23 hours Developmental Stage: Field Testing		RUPS package includes teach skills; training package ing Educational Training (PETC) concerns interper sulting, and training s Target Group: K-12 classro (RUPS) and building-leve trators (PETC) Format: Self-contained ma Duration: 23 hours (RUPS); 260 hours (PETC) Developmental Stage: Field (RUPS); Initial Planning Stage (PETC)
Educational Planning ng package covers cost- iveness analysis oup: K-12 building-level istrict-level administrators elf-contained materials c. 40 hours ntal Stage: Proposed opment		Planning-Programming-Budgeting Systems (PPBS) training package Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Initial Planning	Advanced Educational Planning Training package covers assessment of educational outcomes; PPBS training package Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours each Developmental Stage: Initial Planning		Group Problem Solving trai school decision-makers Target Group: K-12 buildi and district level admi Developmental Stage: Init
				Training materials for installation of the Multiunit School and of Individually Guided Education Target Group: Elementary classroom teachers and building-level administrators Format: Self-contained materials Duration: 3-5 days Developmental Stage: Prototype Stage	
				Guide to Innovation in Education includes chapter on Stabilizing the Innovation Target Group: K-12 classroom teachers, building-level and district-level administrators Format: Self-contained manual Developmental Stage: Field Testing	Guide to Innovation in Educ cludes chapters on Build lationship with Clients Acceptance of Innovation Target Group: K-12 classro building-level and distr administrators Format: Self-contained man Developmental Stage: Field
	Seminar on Administrative Information Technology and More Effec-	Clinic on Program Budgeting (PPBS) Target Group: K-12 building-level and district-level administrators Format: Workshop			Clinic on Human Factors in ment of Educational Adm Target Group: K-12 buildi and district-level adm

			Standardized decision documentation procedures for evaluating past decisions Target Group: College and University administrators Format: Self-instructional manual Developmental Stage: Initial Planning		
		Training package on Systems Technology covers systems analysis and synthesis techniques for the management of classroom instruction Target Group: K-12 classroom teachers Format: Self-contained materials Duration: 60 hours Developmental Stage: Initial Planning	RUPS training package covers evaluative assessment and analysis of action-research data Target Group: K-12 classroom teachers Format: Self-contained materials Duration: 23 hours Developmental Stage: Field Testing		RUPS package includes teach skills; training package ing Educational Training (PETC) concerns interper sulting, and training sk Target Group: K-12 classro (RUPS) and building-leve trators (PETC) Format: Self-contained mat Duration: 23 hours (RUPS); 260 hours (PETC) Developmental Stage: Field (RUPS); Initial Planning Stage (PETC)
tional Planning ckage covers cost- s analysis K-12 building-level t-level administrators contained materials 0 hours tage: Proposed		Planning-Programming-Budgeting Systems (PPBS) training package Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Initial Planning	Advanced Educational Planning Training package covers assessment of educational outcomes; PPBS training package Target Group: K-12 building-level and district-level administrators Format: Self-contained materials Duration: c. 40 hours each Developmental Stage: Initial Planning		Group Problem Solving trai school decision-makers Target Group: K-12 buildi and district level admi Developmental Stage: Init
				Training materials for installation of the Multiunit School and of Individually Guided Education Target Group: Elementary classroom teachers and building-level administrators Format: Self-contained materials Duration: 3-5 days Developmental Stage: Prototype Stage	
				Guide to Innovation in Education includes chapter on Stabilizing the Innovation Target Group: K-12 classroom teachers, building-level and district-level administrators Format: Self-contained manual Developmental Stage: Field Testing	Guide to Innovation in Educ includes chapters on Build lationship with Clients Acceptance of Innovation Target Group: K-12 classro building-level and distr administrators Format: Self-contained man Developmental Stage: Field
	Seminar on Administrative Information Technology and More Effective Decision Making Target Group: K-12 building-level and district-level administrators Format: Seminar Duration: 5-8 days Developmental Stage: Operational Testing	Clinic on Program Budgeting (PPBS) Target Group: K-12 building-level and district-level administrators Format: Workshop Duration: 5-8 days Developmental Stage: Operational Testing			Clinic on Human Factors in ment of Educational Adm Target Group: K-12 buildi and district-level admi Format: Workshop Duration: 5-8 days Developmental Stage: Oper Testing
	Training unit on A System Approach to Policy Making and Organizational Development Target Group: K-12 district-level administrators Format: Workshop and booklet Duration: 3-4 days Developmental Stage: Operational Testing	Training units on Analytical Framework for Educational Planning and Management: Network-based Management Procedures; A System Approach to Educational Management and Problem Solving; and Planning, Programming, Budgeting Systems Target Group: K-12 district-level administrators Format: Workshops and booklets Duration: 3-4 days per unit Developmental Stage: Operational Testing	Training unit on Planning, Programming, Budgeting Systems Target Group: K-12 district-level administrators Format: Workshop and booklet Duration: 3-4 days Developmental Stage: Operational Testing		
			Training program employing CESAA Evaluation Guidelines Target Group: Elementary classroom teachers, building-level and district-level administrators Format: Workshop and self-contained training kit Duration: 4-5 days Developmental Stage: Initial Planning		
		Joint Program in Educational Administration, to train "educational managers" Target Group: K-12, as well as college and university administrators Format: University-based courses plus internship Duration: 3 years Developmental Stage: Operational Testing			

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DEVELOPMENT OF SUPPORTING MATERIALS

	ORGANIZATIONAL ARRANGEMENTS	COMPUTER TECHNOLOGY	INFORMATION DISSEMINATION	DIAGNOSTIC TOOLS FOR ASSESSMENT OF EXISTING CAPABILITIES
	Instructional Planning and Management System will include techniques for selecting and implementing appropriate organizational arrangements Target Group: K-12 district-level administrators Developmental Stage: Proposed Development		Information Systems Component (Information Units and ALERT System) Target Group: K-12 classroom teachers, building-level and district-level administrators Developmental Stage: Initial Planning-Dissemination	Instructional Planning and Management System will include diagnostic techniques by which a school can assess its personnel training needs Target Group: K-12 district-level administrators Developmental Stage: Proposed Development
		Computer program for processing planning information to supplement the Comprehensive Planning Model Target Group: K-12 building-level and district-level administrators Developmental Stage: Proposed Development		Change Continuum Theory to diagnose change capability of school districts Target Group: K-12 classroom teachers, building-level and district-level administrators Developmental Stage: Initial Planning
		Computer programs and technical manuals for programmers and systems analysis for operating computer-based administrative, data management, and data analysis systems Target Group: College and university administrators Developmental Stage: Proposed Development	Descriptive materials on innovative administrative and organizational practices Target Group: College and university administrators Format: Self-contained materials Developmental Stage: Proposed Development	
teamwork n Prepar- onsultants nal, con- ls teachers adminis- ials esting rototype	Tools for diagnosing school building environments, supplementing the RUPS package Target Group: K-12 classroom teachers and building-level administrators Developmental Stage: Proposed Development			PETC package includes diagnosis of training needs Target Group: K-12 building-level administrators
ng for -level :trators l Planning		Advanced Educational Planning training package includes computer operations Target Group: K-12 building-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Initial Planning	Project Inform (multi-media information dissemination project) Target Group: K-12 building-level and district-level administrators Developmental Stage: Proposed Development	
	Instruction and Research Units (Multiunit School) for conduct of research, teacher training, etc., under natural classroom conditions Target Group: Elementary classroom teachers and building-level administrators Developmental Stage: Operational Testing			
ion in- g a Pa- d Gaining teachers, t-level l esting			Review of Knowledge utilization literature has provided bibliographies and a literature survey and analysis Target Group: K-12 classroom teachers, building-level and district-level administrators Developmental Stage: Dissemination	

ıg for -level :trators i Planning		Advanced Educational Planning training package includes computer operations Target Group: K-12 building-level administrators Format: Self-contained materials Duration: c. 40 hours Developmental Stage: Initial Planning	Project Inform (multi-media information dissemination project) Target Group: K-12 building-level and district-level administrators Developmental Stage: Proposed Development	
	Instruction and Research Units (Multiunit School) for conduct of research, teacher training, etc., under natural classroom conditions Target Group: Elementary classroom teachers and building-level administrators Developmental Stage: Operational Testing			
ion in- g a Pe- d Gaining teachers, t-level l esting			Review of Knowledge utilization literature has provided bibliographies and a literature survey and analysis Target Group: K-12 classroom teachers, building-level and district-level administrators Developmental Stage: Dissemination	
he Improve- istration -level strators ional				

CHAPTER III

INTEREST AND ACTIVITY SURVEY OF AGENCIES ATTENDING THE COORDINATING CONFERENCE

In order to ascertain the specific interests of each agency participating in the conference and to diagnose the similarities between agencies, the host organization designed an interest and activity questionnaire. The questionnaire was administered at the opening of the conference to all agency representatives in attendance. (The only agency for which questionnaire data was not obtained was the Northwest Regional Educational Laboratory, whose representative met with the Far West Laboratory staff subsequent to the conference itself.) The purposes for which this questionnaire was designed were threefold: (1) the results would be analyzed and reported on during the conference, in order to enable the participants to compare their areas of interest with those of other agencies in attendance; (2) the questionnaire data would serve as input for a report of the conference proceedings; and (3) in the event that a cooperative information exchange service would be established among conference participants, the questionnaire data would provide the operators of the service with a basis for screening the kinds of information that would be of greatest interest and usefulness.

The questionnaire surveyed six interest dimensions:

(1) target group to which the agency is directing its efforts, from classroom teachers through administrators at the building, district, intermediate, state, or federal level;

(2) educational level, including preschool, elementary, secondary, higher, and adult education;

(3) instructional setting for which training materials are being designed, including preservice training (teacher or administrator),

in-service training (teacher or administrator), workshops or summer institutes, university extension courses, and correspondence courses or self-instructional packages;

(4) agency's major orientation along a continuum of R & D activities, e.g., Research, Development, Dissemination, Facilitating Adoptions, Outcome Evaluation;

(5) interest in techniques for designing or developing training materials; and

(6) a forced distribution of interest in forty-five specific content areas.

The participants' responses to the first section of the questionnaire indicated that, as a group, they are concerned with developing the professional competencies of all groups of educators. District level administrators were given the top priority in the greatest number of cases, followed by building level administrators and classroom teachers. A few agencies assigned top priority to unlisted groups, e.g. the Center for Research on Utilization of Scientific Knowledge focuses its efforts on "educational change agents" regardless of at what level or in what role they may be functioning, while the Regional Education Laboratory for the Carolinas and Virginia is concerned with training college or university administrators. Intermediate-level, state or federal administrators were each designated as second or third priority targets by approximately half of the respondents.

In the second category, a large majority designated elementary and secondary education as the educational levels of greatest interest. Only two of the agencies differentiated between these two levels, and both of these agencies expressed the greatest interest in elementary education. A few persons were also interested in developing training which would be applicable at the preschool or higher education level.

When asked to rank possible instructional settings for agency-developed training programs, the participants gave workshops and summer institutes the first place rank, and inservice administrator training a close second place. In addition, both preservice administrator training programs and self-instructional packages were selected frequently enough to indicate a strong emphasis within the group.

The group priorities among activities along the R & D continuum were assigned to the following, in rank order: (1) Development, (2) Research, (3) Context Evaluation/Situation Analysis, (4) Program Planning/Input Evaluation, and (5) Operations Analysis. The group expressed least interest in Dissemination, Process Evaluation, Outcome Evaluation, and Facilitating Adoptions.

The top rankings for interest in design or development of training materials were assigned by the group to product development, training technology, product testing and evaluation, and training programs. There was moderate interest in simulation techniques and programmed instruction.

The final section of the questionnaire required the participants to assign forty-five topics relevant to educational planning to a forced distribution according to interest. The instructions were as follows: five items were to be designated as first rank (greatest interest), ten items as second rank (considerable interest), fifteen items as third rank (moderate interest), ten items as fourth rank (limited interest), and five items as fifth rank (least interest). The actual ranks assigned to the items by the entire group in attendance are shown in Table II.

Intercorrelations of the responses of each agency and a "quick and dirty" factor analysis revealed that the only major cluster included the following four agencies: Research for Better Schools, Far West Laboratory,

TABLE II

Ranks and Mean Interest Scores of Forty-Five Educational Planning Topics

Topic	Rank	Mean	S.D.
Development or application of performance measures	1	1.90	0.88
Long range educational planning	2	2.00	0.71
Systems analysis	3	2.00	1.05
Educational goal setting	4	2.10	0.88
PPBES	5	2.10	0.88
Stating performance objectives	6	2.22	0.97
Decision making skills	7	2.25	1.39
Curriculum/instructional design/development	8	2.38	1.06
Information systems	9	2.40	1.50
Program evaluation	10	2.44	1.13
Evaluation methodology/techniques	11	2.44	1.42
Needs assessment	12	2.56	0.53
Cost effectiveness/cost benefit analysis	13	2.60	1.07
Problem identification/formulation	14	2.62	0.74
Instructional/behavioral objectives	15	2.67	1.22
Administrative/organizational structure	16	2.70	1.47
Problem solving	17	2.75	0.71
Computer applications in educational planning	18	2.75	1.28
Instructional evaluation	19	2.78	1.20
Educational management	20	2.88	0.99
Instructional/curriculum planning	21	2.89	0.60
Pilot/field test strategies	22	2.89	1.36
Search for instructional alternatives	23	3.00	1.32
Overcoming resistance to change	24	3.10	1.37
Operations research techniques	25	3.11	0.93
Change agent training and support	26	3.11	1.36
Curriculum evaluation	27	3.12	1.25
Information interpretation/evaluation	28	3.20	0.63
Personnel/staff development planning	29	3.20	0.79
Educational change/innovation	30	3.20	1.32
Educational finance planning	31	3.20	1.48
Implementation of educational innovations	32	3.22	0.83
Adaptation of development to local conditions	33	3.22	1.09
Information search/retrieval	34	3.22	0.97
Diagnosing school capabilities	35	3.25	1.16
Information dissemination/diffusion	36	3.30	0.82
New research, development, and diffusion roles	37	3.38	1.30
Organizational climate	38	3.60	0.97
Pupil personnel/guidance planning	39	3.78	0.83
Information services/centers	40	3.89	1.05
Mathematical models of educational systems	41	4.00	0.67
Personnel evaluation	42	4.00	1.33
Facilitation of locally developed innovations	43	4.11	1.17
Educational facilities planning	44	4.20	1.14
Classroom/action research	45	4.22	1.30

Laboratory for the Carolinas and Virginia, and Center for the Advanced Study of Educational Administration. The responses of these agencies indicated equally strong interest in systems analysis, information systems, performance measures, cost effectiveness and PPBES. Within this cluster, Research for Better Schools and the Far West Laboratory were most closely aligned according to intensity of interest in operations research, needs assessment, decision making skills, and adapting developments to local conditions, while the Laboratory for the Carolinas and Virginia and Center for Advanced Study of Educational Administration expressed similar interests in computer applications, goal setting, and problem formulation.

CHAPTER IV

GOALS AND PLANS FOR INTER-AGENCY COOPERATION

When the conference agenda turned to discussion of possible ways in which the agencies present could cooperate in their various developmental activities, the tenor of the group definitely seemed to suggest that such cooperation was both feasible and desirable. The desire to avoid redundancy in the development of tools or training for educational planning and management tasks was expressed repeatedly. The feeling that coordination by various agencies of related or overlapping development tasks would help all these agencies to achieve their own goals more expeditiously appeared to be the consensus of the group.

The host group, the Communication Program of the Far West Laboratory, presented the matrix shown in Table III as a guide by which the conference participants could consider alternative modes of cooperation. This matrix will also be used as a framework within which to summarize the discussion of cooperative ventures which took place at the conference.

Organizational Arrangements. The gathering of representatives from twelve agencies at the Far West Laboratory for a two-day conference on the design and development of educational planning and management systems (EPMS) provided the seed from which permanent organizational arrangements might grow. The conference offered an opportunity for the participants to exchange information relevant to educational planning and management developments and to explore arrangements and approaches for future cooperation.

The idea of a consortium of educational agencies involved in the design of educational planning and management systems was suggested as a potential arrangement for information exchange, coordination, and cooperation. This arrangement was projected as an informal and voluntary association which would carry no legal obligation as far as the agency

TABLE III

Goals Proposed for Inter-Agency Cooperation

GOAL CATEGORIES	A. GOALS TO BE ATTAINED BY THE BEGINNING OF THE CONFERENCE (Mainly FWL goals)	B. GOALS TO ACHIEVE BY THE END OF THE CONFERENCE (Inter-Agency Goals)	C. SUGGESTED LONG-RANGE GOALS (Inter-Agency Goals)
ORGANIZATIONAL ARRANGEMENTS	1. Bring together representatives of educational agencies involved in the design of Educational Planning and Management Systems (EMPS) and Supporting Training and Evaluation Systems (STES).	1. Develop a plan for maintaining liasion among those involved in the design of EPMS and STES. 2. Map out a strategy for the identification of agencies involved in the design of EPMS and STES that are not represented at the conference.	1. Establish and maintain liasion among various agencies involved in EPMS and STES.
INFORMATION COLLECTION	1. Collect information on the existing state of developments in EMPS and STES.	1. Analyze information on EMPS and STES reported at the conference. 2. Based on the information collected and analyzed, develop an information synthesis. 3. Propose a system for the collection, organization and storing of information relevant to EPMS and STES.	1. Systematically collect, organize and store information relevant to EPMS and STES.
INFORMATION DISSEMINATION	1. Develop an outline for reporting on the conference.	1. Write and disseminate a report on the conference.	1. Periodically disseminate information to the profession relevant to developments in EPMS and STES.

TABLE III (CONT'D)

Goals Proposed for Inter-Agency Cooperation

GOAL CATEGORIES	A. GOALS TO BE ATTAINED BY THE BEGINNING OF THE CONFERENCE (Mainly FWL goals)	B. GOALS TO ACHIEVE BY THE END OF THE CONFERENCE (Inter-Agency Goals)	C. SUGGESTED LONG-RANGE GOALS (Inter-Agency Goals)
INFORMATION DISSEMINATION		2. Develop a scheme for the periodic dissemination of information of information relevant to EPMS and STES. Potential means might include: a. dissemination through literature b. dissemination conferences c. reports at conference	
DESIGN AND DEVELOPMENT	1. Propose a concept of cooperation, manifested in a plan for the conference.	1. Work out a plan of cooperation for the development of EPMS and STES. Potential modes of cooperation include: a. furnishing research input b. joint development of systems c. complementary development of systems d. testing each other's products e. reviewing, critiquing each other's products f. assisting in dissemination g. sharing technology	1. Implement plans of cooperative development of EPMS and STES. 2. Establish feedback strategies and, based on feedback improve upon cooperative arrangements
INTER-AGENCY CONFERENCES	1. Develop proposals for future inter-agency conferences.	1. Evolve an analysis of this conference. 2. Consider plans for similar conferences.	1. Schedule conferences to exchange information and ideas on developments relevant to EPMS and STES.

TABLE III (CONT'D)

Goals Proposed for Inter-Agency Cooperation

GOAL CATEGORIES	A. GOALS TO BE ATTAINED BY THE BEGINNING OF THE CONFERENCE (Mainly FWL goals)	B. GOALS TO ACHIEVE BY THE END OF THE CONFERENCE (Inter-Agency Goals)	C. SUGGESTED LONG-RANGE GOALS (Inter-Agency Goals)
PROFESSIONAL DEVELOPMENT	1. Develop ideas for the establishment or support of programs by which to train researchers and developers for the design of EMPS and STES.	1. Invite and discuss ideas for the establishment-or support- of programs by which to train researchers and developers for the design of EPMS and STES.	1. Plan for a program for the strengthening of leadership in the design of EPMS and STES.

is concerned and which might be activated as desired by all of the participating agencies or by any two or more. The suggestion was made that this group of conference participants could form the initial membership for the consortium. It was recognized, however, that there are other agencies involved in the design of educational planning and management systems who were not represented at the conference. Therefore, the participants agreed to consider the question of who else should be involved and to exchange information relevant to the identification of other agencies who should be included in such a consortium. Agencies of various kinds might be considered, with the only stipulation being that their developments be designed for application on a national, or at least a regional, scale. The educational planning and management consortium is conceived as having growth potential which will be realized as other agencies join and as the planned activities of information exchange, coordinating and cooperative arrangements are activated. Liaison between the participating agencies will be maintained by informal contacts, by the exchange of findings of common interest, and by periodically reporting to each other on the progress being made in their R & D activities. The periodic reporting might eventually take the form of a newsletter.

The idea of intra-regional operations was also explored at the conference. It was proposed that concentrated efforts be initiated within the various geographical regions of the country to discover and utilize the educational planning and management resources of each region, and that a network through which information could be transmitted from region to region be created. However, the establishment of such intra-regional operations was not within the power of this group acting alone. The group expressed uncertainty as to what might be the proper regional agencies that would assume responsibility for administering such operations. Several

participants argued that the focus of educational laboratories' activities had become national and that, therefore, the laboratories should not be asked to coordinate such regional efforts.

Information Collection. Both prior to and during the conference, information concerning participants' efforts to increase school people's planning and management competencies was collected and analyzed. This information is displayed in Table I following page 68. Additional information concerning the information interests of the conference participants was collected during the conference and is reported in Chapter III.

It was recognized that member agencies of the proposed educational planning and management consortium would benefit from sharing information relevant to their own information collection and to their R & D findings and activities. Such information exchange would be facilitated if this information could be collected and organized at a central place. The Communication Program of the Far West Laboratory for Educational Research and Development offered to establish such an information file, provided that funding outside the Program's current budget could be obtained for this purpose.

It was proposed that the Communication Program would collect, organize, and store information relevant to educational planning and management systems. Staff members of the educational agencies represented at the conference would cooperate in the development of these information files by providing input to these files. Initially, attempts would be made to create information files that would be responsive to the specific information requests of this small group of conference participants and related agencies. The information interest data obtained through the interest and activity survey reported in Chapter III could be used as a basis for selecting "descriptors" for the educational planning files. The Communication Program would

periodically report on the information collected and would make it available to the Educational Resources Information Center (ERIC) system. It is expected that a much larger audience would benefit from this projected information service. This information collection and reporting operation might eventually take the form of a clearinghouse on educational planning and, as such, might become a component of the ERIC system.

Information Dissemination. A framework of conference objectives and procedures was developed by the Communication Program and presented at the beginning of the conference for consideration and modification. In its revised form this framework has served as the basic scheme for reporting the proceedings of the conference. The dissemination effort subsequent to the conference consisted of two major tasks: the development of a report of the conference and the dissemination of this report to conference participants, as well as to R and D centers, regional educational laboratories, and potentially interested federal and state agencies.

Of long-range concern to the conference participants, however, was the dissemination of information collected by the Communication Program relevant to educational planning and management. Four methods of disseminating information beyond the boundaries of the consortium group were considered at the conference: (a) cooperation with the ERIC system in dissemination of information from the Communication Program's Educational Planning files, (b) dissemination by developing periodic (e.g., annual) review of R and D findings and literature surveys relevant to the Educational Planning and Management System domain, (c) dissemination through conferences called by the consortium for agencies concerned with R and D on educational planning and management and for representatives of potential user groups of the Educational Planning and Management System, and (d) dissemination by member agencies seeking out opportunities to report to various conferences

and meetings on developments relative to the Educational Planning and Management System.

The group agreed to support a dissemination conference involving a wider range of participants in late spring, 1970, and for the staging of similar conferences in the future.

Design and Development. The Communication Program considered attendance at the conference to be indicative of interest in cooperation with other agencies engaged in the development of an Educational Planning and Management System. The Communication Program staff prepared a set of several potential cooperative arrangements for consideration by the conferees (see Table III). The following are several potential modes of cooperation that were considered:

1. furnishing research input for each other's products;
2. joint development of products;
3. complementary development of products;
4. testing each other's products;
5. reviewing and critiquing each other's products;
6. assisting in dissemination of each other's products;
7. sharing developmental technology; and
8. exchange of staff members.

In addition to the above list, a proposal for cooperation and coordination in design and development on a regional basis with the involvement of both regional and local agencies emerged from the group.

Of the potential modes of cooperation under consideration, the group felt that the three most feasible alternatives at this time were (a) reviewing and critiquing each other's products, (b) testing each other's products, and (c) sharing developmental technology. The conference group expressed quite intense interest in each of these alternatives. The group designated

furnishing research input, assisting in dissemination, and complementary development as being of secondary interest. Although it was considered highly desirable, the most comprehensive means of cooperation, joint development of products, was not felt to be practicable at this time.

Closure on plans for long-range cooperative arrangements for product development was not sought at the conference, in the belief that specific proposals would emerge after representatives of agencies had returned to their home bases and had discussed potential modes of cooperation with their colleagues. As a result of such follow through, one cooperative endeavor has already occurred. A two-day workshop on educational needs assessment was conducted at the Far West Laboratory for Educational Research and Development during the month of January, 1970 (participating agencies included the Northwest Regional Educational Laboratory, Research for Better Schools, Operation PEP, and the Far West Laboratory). In addition, the representative of the Research Corporation of the Association of School Business Officials expressed interest at the conference in cooperating with other members of the educational planning and management consortium in organizing a symposium on the subject of PPBES for schools.

Inter-agency Conferences. The Communication Program felt that the conference had proved highly beneficial in terms of knowledge gained concerning educational planning and management developments underway in the various agencies. Agreement with this conclusion was expressed by other conference participants. The suggestion arose that another conference be held next fall for the consortium agencies and other related agencies that may have been identified during the intervening period. The group considered conferences or symposia of several types: (a) information sharing (such as the conference reported herein), (b) topical conferences on

developmental subjects of immediate need (the interest and activity profile reported in Chapter III could serve as a tool for selecting interested participants for symposia on given topics), (c) conferences involving potential users of the educational planning and management system, and (d) dissemination conferences to keep participants abreast of R and D concerning educational planning and management.

Professional Development. Due to lack of time at the conference, the subject of how inter-agency cooperation could be used to promote professional development was treated only superficially. However, the group was in strong agreement that this was an extremely important area of concern and that cooperative arrangements by which to train professional manpower for staffing R and D agencies involved in the design of educational planning and management systems should be reconsidered in the future.

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